# Electronic Data Reporting
## Acid Rain Program/ Subpart H

**Revised January 24, 2001 Version 2.1**

### *Who needs to use Electronic Data Reporting v2.1 formats?*

The Acid Rain Program and Subpart H of Part 75 require submission of monitoring system certification applications and periodic emissions reports (including monitoring plan updates) in electronic format. Software developers and affected companies will use the revisions to the electronic file record structures in EDR v2.1 to develop computer-generated reports that meet the requirements of 40 CFR Part 75.

### *When do I need to begin reporting using EDR Version 2.1?*

For the Acid Rain Program, Electronic Data Reporting format (EDR) Version 2.1 replaces EDR Version 1.3 beginning on April 1, 2000.

For facilities subject to Subpart H of Parts 75 and 96, you must report in EDR Version 2.1 beginning:

- May 1, 2000 if the $NO_x$ Authorized Account Representative intends to apply for early reduction credits; or
- May 1, 2002 for other units operating before January 1, 2002. (See § 96.70(b) for units operating on or after January 1, 2002).

For units subject to Subpart H of Part 75 that are not subject to Part 96, the deadline will be specified by the State for the particular program.

For facilities subject to the OTC $NO_x$ Budget Program only, owners and operators must meet the requirements of EDR v2.0 (July 3, 1997). The effective date of these requirements are set forth in State regulation. For more information on EDR v2.0 requirements, see ***EDR v2.0 Monitoring Certification and Reporting Instructions,*** July 3, 1997.

### *Which records are needed for which programs?*

The Program Column in Tables 4 through 7 indicates the regulatory programs for which each record type may be applicable. "ARP" indicates Part 75 Acid Rain Program requirements, "OTC NBP" or "OTC" indicates State requirements for the OTC $NO_x$ Budget Program, and "Subpart H" indicates the applicability of the record to a unit using the $NO_x$ mass monitoring provisions in Subpart H of Part 75 (e.g., units covered by the SIP Call and $NO_x$ Model Trading Rule). This designation includes Acid Rain units also subject to Subpart H.

### *How do I know if a record type has been updated from a previous version of the EDR?*

The Record Type Column in Tables 4 through 7 indicates both the general information required in the record type and additional information about whether the record is new or has been modified from EDR v1.3. The indicators used to describe the status of the record are:

| | |
|---|---|
| New: | This record type was not in EDR v1.3; it was added either in EDR v2.0 or EDR v2.1. |
| Modified: | This record type was in EDR v1.3 and was modified in EDR v2.0 (for purposes of the OTC $NO_x$ Budget Program) and/or EDR v2.1 (to support the revisions to Part 75 and Subpart H). |
| Optional: | This record type was in EDR v1.3. It is not required for Acid Rain units subject to Part 75. However, if you continue to submit it, EPA will accept it. |

If a record type does not include any of these indicators, it has not changed since EDR v1.3.

### *How is the EDR organized?*

The EDR is divided into seven tables:

Table 1 provides an index listing all the possible record types that may be submitted in an electronic report.

Table 2 provides an index of all record types which were included in EDR v2.0 for the OTC NBP reporting only. The OTC NBP record types are included in Appendix A to this document.

Table 3 identifies all record types that have been replaced or retired since EDR v2.1. The replaced or retired record types are included in Appendix B to this document.

Tables 4 through 7 define the specific computerized layout or "record structures" of the electronic reports, containing the following types of data: Quarterly Emission Data (Table 4), Monitoring Plan Data (Table 5), Certification-QA/QC Test Data (Table 6), and Compliance Certification Data (Table 7).

The record structures define the order, length, and placement of information within the electronic report or "file" (i.e., the Record Type, Type Code, Start Column, Data Element Description, Units, Range, Length, and Fortran (FTN) Format for each data element in the electronic report). This information is used to construct electronic files to submit electronic reports to the U.S. Environmental Protection Agency.

### *How do I find out more about reporting using the EDR v2.1 formats?*

More detailed information on the selection of record types for reporting and the use of specific columns within a record type for a particular program is included in the ***Revised EDR v2.1 Monitoring Certification and Reporting Instructions***, January, 2000. You can find these instructions on EPA's Acid Rain Program homepage at www.epa.gov/airmarkets.

## TABLE 1: EDR V2.1 ELECTRONIC DATA REPORTING RECORD TYPES

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Facility Information (100) | Facility Information | Facility Identification (Modified) | 100 |
| | | Record Types Submitted (Optional) | 101 |
| | | Facility Location and Identification Information (New) | 102 |
| Monitoring Data (200) | Pollutant Gas Concentrations | $SO_2$ Concentration Data | 200 |
| | | $NO_x$ Concentration Data (Modified) | 201 |
| | | $CO_2$ Concentration Data (Modified) | 202 |
| | Diluent Gas Concentrations | $CO_2$ Diluent Concentration Data (Modified) | 210 |
| | | $O_2$ Diluent Concentration Data (Modified) | 211 |
| | Moisture Data | Moisture Data (New) | 212 |
| | Volumetric Flow | Volumetric Flow Data (Modified) | 220 |
| | Daily Quality Assurance Data and Results | Daily Calibration Test Data and Results (Modified) | 230 |
| | | Flow Daily Interference Check Results | 231 |
| | Reference Method Backup QA Data | Hourly Pollutant and Diluent Concentration Data from RM Backup Analyzers | 260 |
| | | Quality Assurance Run Data for Reference Method Analyzers or Systems Used as Backup CEMS | 261 |
| | | Reference Method Backup Flow Rate Monitor (Run Summary) (Modified) | 262 |
| Unit Data (300) | Unit Operating and Cumulative Emissions Data | Unit Operating Parameters (Modified) | 300 |
| | | Quarterly Cumulative Emissions Data (Modified) | 301 |
| | | Oil Fuel Flow (Modified) | 302 |
| | | Gas Fuel Flow (Modified) | 303 |
| | | Quarterly Heat Input From Long Term Fuel Flow Measurements for Qualifying Low Mass Emission Units (New) | 305 |
| | | Cumulative $NO_x$ Mass Emissions Data (New) | 307 |
| | $SO_2$ Mass Emissions Data | $SO_2$ Mass Emissions Data (Modified) | 310 |
| | | $SO_2$ Mass Emissions Alternative Estimation Parameters for Oil (Modified) | 313 |
| | | $SO_2$ Mass Emissions Alternative Estimation Parameters for Natural Gas (Modified) | 314 |
| | $NO_x$ Emissions Data | $NO_x$ Emission Rate Data | 320 |
| | | $NO_x$ Emission Rate Alternative Estimation Parameters for Oil and Gas (Modified) | 323 |
| | | $NO_x$ Emission Rate Estimation Based on Appendix E (New) | 324 |
| | | $NO_x$ Emission Rate Estimation Based on Appendix E for Multiple Fuel Hours (New) | 325 |
| | | $NO_x$ Mass Emissions (New) | 328 |

## TABLE 1: EDR V2.1 ELECTRONIC DATA REPORTING RECORD TYPES

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Unit Data (300) | $CO_2$ Mass Emissions Data | $CO_2$ Mass Emissions Data (Modified) | 330 |
| | | $CO_2$ Mass Emissions Estimation Parameters | 331 |
| | Qualifying Low Mass Emissions Unit Data | Hourly Emissions Data for Qualifying Low Mass Emissions Units (New) | 360 |
| Monitoring Plan Information (500) | | Stack/Pipe Header Definition Table (Modified) | 503 |
| | | Unit Information (New) | 504 |
| | | Program Indicator for Report (New) | 505 |
| | | EIA Cross Reference Information (New) | 506 |
| | | Fuel Usage Data to Qualify as a Peaking Unit or an Acid Rain Program Gas-fired Unit (New) | 507 |
| | | Subpart H Reporting Frequency Change (New) | 508 |
| | | Monitoring Systems/Analytical Components Table (Modified) | 510 |
| | | Formula Table | 520 |
| | | Span Table (Modified) | 530 |
| | | Maximums, Minimums, Defaults and Constants (New) | 531 |
| | | Unit and Stack Operating Load Data (New) | 535 |
| | | Range of Operation, Normal Load, and Load Usage (New) | 536 |
| | | Fuel Flowmeter Data (Modified) | 540 |
| | | Reasons for Monitoring System Downtime or Missing Parameter (Optional) | 550 |
| | | Monitoring System Recertification, Maintenance, or Other Events (New) | 556 |
| | | Appendix E $NO_x$ Correlation Curve Segments (New) | 560 |
| | | Monitoring Methodology Information (New) | 585 |
| | | Control Equipment Information (New) | 586 |
| | | Unit Fuel Type (New) | 587 |
| Certification Test Data (600) | Calibration/Error Tests | 7-Day Calibration Error Test Data and Results (Modified) | 600 |
| | Linearity Checks | Linearity Check Data (Modified) | 601 |
| | | Linearity Check Results (Modified) | 602 |
| | Leak Checks | Flow Leak Check Results (Modified) | 603 |
| | Flow/Load Checks | Reference Data for Flow-to-Load Ratio or Gross Heat Rate Evaluation (New) | 605 |
| | | Quarterly Flow-to-Load Ratio or Gross Heat Rate Check (New) | 606 |

## TABLE 1: EDR V2.1 ELECTRONIC DATA REPORTING RECORD TYPES

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Certification Test Data (600) | RATA/Bias Tests | RATA and Bias Test Data (Modified) | 610 |
| | | RATA and Bias Test Results (Modified) | 611 |
| | | Reference Method Supporting Data for Flow RATA Tests (New) | 614 |
| | | Reference Method Supporting Data for Flow RATA Tests (New) | 615 |
| | | Reference Method Supporting Data for Flow RATA Tests (New) | 616 |
| | Cycle Time Test | Cycle Time Test Data and Results (Modified) | 621 |
| | On Line/Off Line Calibration Demonstration | Qualifying Test for Off-line Calibration Error Tests (New) | 623 |
| | Miscellaneous QA Test/Activity | Other QA Activities (New) | 624 |
| | Fuel Flowmeter Accuracy Tests | Fuel Flowmeter Accuracy Test (New) | 627 |
| | | Accuracy Test for Orifice, Nozzle, or Venturi Type Fuel Flowmeters (New) | 628 |
| | Quarterly Fuel Flow-to-Load Analysis | Baseline Data for Fuel-Flow-to-Load Ratio or Gross Heat Rate Check for Fuel Flowmeters (New) | 629 |
| | | Quarterly Fuel-Flow-to-Load Test for Fuel Flowmeters (New) | 630 |
| | Alternative Monitoring Petition Data | Alternative Monitoring System Approval Petition Data (Renumbered from EDR v1.3 RT 630) | 640 |
| | | Alternative Monitoring System Approval Petition Results and Statistics (Renumbered from EDR v1.3 RT 631) | 641 |
| | LME Certification | Qualifying Data for Low Mass Emissions Units Excepted Methodology (New) | 645 |
| | Appendix E and Unit Specific Default Emission Rate Test Data | $NO_x$ Emission Rate Correlation Test Data (Modified) | 650 |
| | | $NO_x$ Emission Rate Correlation Results (Modified) | 651 |
| | | Heat Input from Oil Combusted During Test (Modified) | 652 |
| | | Heat Input from Gas Combusted During Test (Modified) | 653 |
| | | Unit Group Testing (New) | 660 |
| | QA Test Extensions/Exemption Claims | Single-load Flow RATA Claim (New) | 695 |
| | | Fuel Flowmeter Accuracy Test Extension (New) | 696 |
| | | RATA Deadline Extension or Exemption (New) | 697 |
| | | Quarterly QA Test Exemption Claim (New) | 698 |
| | | QA Test Extension Claim Based on Grace Period (New) | 699 |

## TABLE 1: EDR V2.1 ELECTRONIC DATA REPORTING RECORD TYPES

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Certification Data (900) | Certification Data | Part 75 Certification Statement and Designated Representative Signature | 900 |
| | | Part 72 Certification Statement | 901 |
| | | Cover Letter Text (file specific) (Optional) | 910 |
| | | Cover Letter Text (not specific to file) (Optional) | 920 |
| | | Subpart H Certification Statement and $NO_x$ Authorized Account Representative Signature (New) | 940 |
| | | Subpart H General Certification Statement (New) | 941 |
| | | Contact Person Record (New) (Optional) | 999 |

## TABLE 2: OTC/NBP ONLY RECORD TYPES (EDR v2.0)

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Monitoring Data (200) | | Daily QA Reference Checks for Non-CEMS Parameters | 232 |
| | | Other Daily QA Checks | 233 |
| Unit Data (300) | | Long Term Fuel Flow Measurements | 306 |
| | | Hourly Heat Input Data for Alternative Heat Input Methods | 350 |
| | | Supplementary Heat Input Data for Solid Fuel Measurements | 351 |
| | | Supplementary Heat Input Data for Other Methodologies | 352 |
| Monitoring Plan Information (500) | | Monitoring System Recertification Events | 555 |
| Certification Test Data (600) | | Fuel Flowmeter Calibration Data | 625 |
| | | Fuel Flowmeter Calibration Results | 626 |
| | | Identical Unit Group Test Results for Appendix E | 661 |
| Certification Data (900) | | $NO_x$ Budget Program Certification Statement and Authorized Account Representative Signature | 930 |
| | | $NO_x$ Budget Program General Certification Statement | 931 |

## TABLE 3: RESERVED/EXPIRED/REPLACED RECORD TYPES

| RECORD TYPES | | | |
|---|---|---|---|
| **GROUP** | **SUB-GROUP** | **RECORD TYPE** | **RECORD** |
| Unit Data (300) | $SO_2$ Mass Emissions Data | $SO_2$ Mass Emissions Alternative Estimation Parameters for Oil (Replaced by RT 313) | 311 |
| | | $SO_2$ Mass Emissions Alternative Estimation Parameters for Natural Gas (Replaced by RT 314) | 312 |
| | $NO_x$ Emissions Data | $NO_x$ Emission Rate Alternative Estimation Parameters for Oil (Replaced by RT 323) | 321 |
| | | $NO_x$ Emission Rate Alternative Estimation Parameters for Natural Gas (Replaced by RT 323) | 322 |
| Unit Data (400) | $SO_2$ Control Equipment Data | $SO_2$ Control Equipment Operation Parameters | 400 |
| | | $SO_2$ Control Equipment Scrubber Module Parameters | 401 |
| | $NO_x$ Control Equipment Parameters | $NO_x$ Control Equipment Operation Parameters | 410 |
| | Qualifying Phase I $SO_2$ Control Equipment Parameters | $SO_2$ Phase I Technology Post-Combustion Control Parameters Inlet Monitors | 420 |
| | | $SO_2$ Phase I Technology Post-Combustion Control Parameters Outlet Monitors | 421 |
| | | $SO_2$ Phase I Technology Pre-Combustion Control Parameters | 422 |
| | | $SO_2$ Phase I Technology Combustion Emission Controls | 423 |
| Monitoring Plan Information (500) | | Unit Definition Table (Replaced by RT 502, January 1, 1996) | 500 |
| | | Stack/Pipe Header Definitions Table (Replaced by RT 503) | 501 |
| | | Unit Definition Table § 75.53(c)(2) (Replaced by RTs 504, 505, 585, 586, and 587) | 502 |
| | | Monitoring System Certification Status/Events (Withdrawn by Question C5 in the Consolidated Questions and Answers on OTC $NO_x$ Budget Program Monitoring and Reporting, June 2, 1998.) | 511 |
| Certification Test Data and Results (600) | RATA/Bias Tests | Reference Method Supporting Data for Gas RATAs (Replaced by RTs 614, 615, and 616) | 612 |
| | | Reference Method 2 Supporting Data for Flow RATA Tests (Replaced by RTs 614, 615, and 616) | 613 |
| | Cycle/Response Time | Cycle Time/Response Time Test Data and Results (Replaced by RT 621) | 620 |
| | Alternative Monitoring System Petitions Test Data and Results | Alternative Monitoring System Approval Petition Date (see RT 640 and 641) | 630 |
| | | Alternative Monitoring System Approval Petition Results and Statistics (See RT 640 and 641) | 631 |

## TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| FACILITY INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **FACILITY INFORMATION** | | | | | | | | |
| Facility Identification (Modified) | 100 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Facility/ORISPL number | | | | 6 | I6 |
| | | 10 | Calendar quarter data contained in report | | | 1-4 | 1 | I1 |
| | | 11 | Calendar year data contained in report | | YYYY | ≥1993 | 4 | I4 |
| | | 15 | EDR version (V2.0, V2.1) [1] | | | | 5 | A5 |
| | | | | | Total Record Length | | 19 | |
| Record Types Submitted (Optional) | 101 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Stack/Pipe ID | | | | 6 | A6 |
| | | 16 | Parameter reported [2] | | | | 7 | A7 |
| | | 23 | Record type used | | | | 3 | I3 |
| | | 26 | Number of records | | | 1-9999 | 4 | I4 |
| | | | | | Total Record Length | | 29 | |
| Facility Location and Identification Information (New) | 102 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Plant name | | | | 20 | A20 |
| | | 24 | EPA facility ID (FINDS) | | | | 12 | A12 |
| | | 36 | EPA AIRS facility system (AFS) ID | | | | 10 | A10 |
| | | 46 | State facility ID | | | | 15 | A15 |
| | | 61 | Source category/type | | | | 20 | A20 |
| | | 81 | Primary SIC code | | | | 4 | I4 |
| | | 85 | State postal abbreviation | | | | 2 | A2 |
| | | 87 | County code (FIPS) | | | | 3 | I3 |
| | | 90 | Reserved | | | | 1 | |
| | | 91 | Latitude | | DDMMSS | | 6 | I6 |
| | | 97 | Longitude | | DDDMMSS | | 7 | I7 |
| | | | | | Total Record Length | | 103 | |

[1] EDR version 1.3B expires on 3/31/1999 and EDR version 1.3 expires on 3/31/2000.

[2] Available codes are: CO2CONC, CO2MASS, DILUENT, FLOWRTE, GASRATE, HEATINP, LOWMASS, MOISTUR, NOXCONC, NOXMASS, NOXRATE, OILRATE, OPERATN, OSNSUMM, QTRSUMM, SO2CONC, SO2MASS

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| MONITORING DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **POLLUTANT GAS CONCENTRATIONS** | | | | | | | | |
| $SO_2$ Concentration Data<br><br>**ARP only** | 200 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Percent monitor data availability for $SO_2$ | | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Average $SO_2$ concentration for the hour | | ppm | | 6 | F6.1 |
| | | 35 | Average $SO_2$ concentration for the hour adjusted for bias | | ppm | | 6 | F6.1 |
| | | 41 | Method of determination code | | | 01-10,12, 16,17,19, 20,21,23, 54,55 | 2 | I2 |
| | | | | | Total Record Length | | 42 | |
| $NO_x$ Concentration Data<br><br>(Modified) | 201 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Average $NO_x$ concentration for the hour | | ppm | | 6 | F6.1 |
| | | 30 | Method of determination code[3] | | | 01-04, 06-12,17, 19,20,21, 23,54,55 | 2 | I2 |
| | | 32 | Adjusted average $NO_x$ concentration for the hour | | ppm | | 6 | F6.1 |
| | | 38 | Percent monitor data availability for $NO_x$ concentration | | % | 0.0-100.0 | 5 | F5.1 |
| | | | | | Total Record Length | | 42 | |
| $CO_2$ Concentration Data<br><br>(Modified)<br><br>**ARP Only** | 202 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Average $CO_2$ concentration for the hour | | % | | 6 | F6.1 |
| | | 30 | Method of determination code | | | 01-04, 06-10, 12,17,20, 23,54,55 | 2 | I2 |
| | | 32 | Percent monitor data availability for $CO_2$ concentration | | % | 0.0-100.0 | 5 | F5.1 |
| | | | | | Total Record Length | | 36 | |

[3] MODCs 30, 31, 35, and 36 were used in EDR v2.0 for OTC sources. These codes are not allowed for EDR v2.1.

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| MONITORING DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **DILUENT GAS CONCENTRATIONS** | | | | | | | | |
| $CO_2$ Diluent Concentration Data (Modified) | 210 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Average $CO_2$ concentration for the hour | | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Method of determination code[4] | | | 01-04, 06-10,12,17, 20,23,54,55 | 2 | I2 |
| | | 31 | Percent monitor data availability for $CO_2$ concentration | | % | 0.0-100.0 | 5 | F5.1 |
| | | | | | | Total Record Length | 35 | |
| $O_2$ Diluent Concentration Data (Modified) | 211 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Average $O_2$ concentration for the hour | | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Method of determination code[4] | | | 01-04, 06-10, 12,17,20, 23,54,55 | 2 | I2 |
| | | 31 | Moisture basis of measurement (W-wet or D-dry (for $O_2$ used for moisture calculations), Blank (for $O_2$ used only for diluent purposes)) | | | W,D | 1 | A1 |
| | | 32 | Percent monitor data availability for $O_2$ concentration | | % | 0.0-100.0 | 5 | F5.1 |
| | | | | | | Total Record Length | 36 | |
| **MOISTURE DATA** | | | | | | | | |
| Moisture Data (New) | 212 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Average moisture content of flue gases for the hour | | %H2O | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Formula ID | | | | 3 | A3 |
| | | 32 | Method of determination code[5] | | | 01-04, 06-10,12, 21,23,54,55 | 2 | I2 |
| | | 34 | Percent monitor data availability for moisture | | % | 0.0-100.0 | 5 | F5.1 |
| | | | | | | Total Record Length | 38 | |

[4] MODC 30 was used in EDR v2.0 for OTC sources. This code is not allowed for EDR v2.1.

[5] MODCs 30 and 31 were used in EDR v2.0 for OTC sources. These codes are not allowed for EDR v2.1.

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

## MONITORING DATA

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | FIELD NOTES | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|---|
| **VOLUMETRIC FLOW** | | | | | | | | |
| Volumetric Flow Data (Modified) | 220 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Percent monitor data availability for volumetric flow | | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Average volumetric flow rate for the hour | | scfh | | 10 | I10 |
| | | 39 | Average volumetric flow rate for the hour adjusted for bias | | scfh | | 10 | I10 |
| | | 49 | Reserved | | | | 5 | |
| | | 54 | Operating load range corresponding to gross load | | | 01-20 | 2 | I2 |
| | | 56 | Method of determination code[5] | | | 01-12, 20, 23,54,55 | 2 | I2 |
| | | | | | | Total Record Length | 57 | |
| **DAILY QUALITY ASSURANCE DATA AND RESULTS** | | | | | | | | |
| Daily Calibration Test Data and Results (Modified) | 230 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Instrument span [6] | | | | 13 | F13.3 |
| | | 37 | Reference value [6] | | | | 13 | F13.3 |
| | | 50 | Measured value [6] | | | | 13 | F13.3 |
| | | 63 | Results (calibration error or \|R-A\|) | | %,ppm | 0.0-100.0 | 5 | F5.1 |
| | | 68 | Alternative performance specification (APS) flag[7] | | | 0,1 | 1 | I1 |
| | | 69 | Reserved | | | | 2 | |
| | | 71 | Calibration gas or reference signal level (Z-zero, M-mid, H-high) | | | Z,M,H | 1 | A1 |
| | | 72 | Span scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | | | | | Total Record Length | 72 | |
| Flow Daily Interference Check Results | 231 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Status (P-pass, F-fail) | | | P,F | 1 | A1 |
| | | 25 | Reserved | | | | 2 | |
| | | | | | | Total Record Length | 26 | |

[6] Report span, reference values, and measured values in calibration span units defined in RT 530, column 62.

[7] If an alternative performance specification (|R-A|) is used for $SO_2$ or $NO_x$ low emitters or for low-span DP-type flow monitors, according to section 3 of Appendix A to Part 75, a 1 is reported; a zero is reported otherwise. For $CO_2$ or $O_2$ |R-A| is the normal calculation method; therefore, a 0 (zero) should always be reported for $CO_2$ and $O_2$ and there is no alternative specification.

## TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| MONITORING DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **REFERENCE METHOD BACKUP QA DATA** | | | | | | | | |
| Hourly Pollutant and Diluent Concentration Data from RM Backup Analyzers | 260 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Reference method component ID | | | | 3 | A3 |
| | | 13 | Reference method monitoring system ID | | | | 3 | A3 |
| | | 16 | Parameter monitored (SO2, NOX, CO2, O2) | | | | 4 | A4 |
| | | 20 | Run number | | | | 2 | I2 |
| | | 22 | Date | | YYMMDD | | 6 | I6 |
| | | 28 | Hour | | HH | 00-23 | 2 | I2 |
| | | 30 | Unadjusted (raw) average pollutant or diluent concentration for the hour | | %, ppm | | 7 | F7.2 |
| | | 37 | Adjusted average pollutant or diluent concentration for the hour | | %, ppm | | 7 | F7.2 |
| | | | | | | Total Record Length | 43 | |

## TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| MONITORING DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **REFERENCE METHOD BACKUP QA DATA** | | | | | | | | |
| Quality Assurance Run Data for Reference Method Analyzers or Systems Used as Backup CEMS | 261 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Reference method component ID | | | | 3 | A3 |
| | | 13 | Reference method monitoring system ID | | | | 3 | A3 |
| | | 16 | Run number | | | | 2 | I2 |
| | | 18 | RM run start date | | YYMMDD | | 6 | I6 |
| | | 24 | RM run start hour | | HH | 00-23 | 2 | I2 |
| | | 26 | RM run end date | | YYMMDD | | 6 | I6 |
| | | 32 | Rm run end hour | | HH | 00-23 | 2 | I2 |
| | | 34 | Type of analyzer/system | | | EXT, DIL | 3 | A3 |
| | | 37 | Moisture basis of RM analysis | | | WET, DRY | 3 | A3 |
| | | 40 | Instrument span (as defined in App A, Part 60) | | | | 5 | I5 |
| | | 45 | Dilution factor | | | | 5 | I5 |
| | | 50 | Reference zero gas concentration | | | | 7 | F7.2 |
| | | 57 | Initial (pre-test) calibration response--zero gas | | | | 7 | F7.2 |
| | | 64 | Pre-test calibration error--zero gas (% of span) | | % | | 5 | F5.1 |
| | | 69 | Reference mid-level gas concentration | | | | 7 | F7.2 |
| | | 76 | Initial (pre-test) calibration response--mid gas | | | | 7 | F7.2 |
| | | 83 | Pre-test calibration error--mid gas (% of span) | | % | | 5 | F5.1 |
| | | 88 | Reference high-level gas concentration | | | | 7 | F7.2 |
| | | 95 | Initial (pre-test) calibration response--high gas | | | | 7 | F7.2 |
| | | 102 | Pre-test calibration error--high gas (% of span) | | % | | 5 | F5.1 |
| | | 107 | Upscale gas used during run (M-mid, H-high) | | | M,H | 1 | A1 |
| | | 108 | Pre-run system response--zero gas | | | | 7 | F7.2 |
| | | 115 | Pre-run system bias (non-dilution) or calibration error (dilution)--zero gas (% of span) | | % | | 5 | F5.1 |
| | | 120 | Post-run system response--zero gas | | | | 7 | F7.2 |
| | | 127 | Post-run system bias (non-dilution) or calibration error (dilution)--zero gas (% of span) | | % | | 5 | F5.1 |
| | | 132 | Pre-run system response--upscale gas | | | | 7 | F7.2 |
| | | 139 | Pre-run system bias (non-dilution) or calibration error (dilution)--upscale gas (% of span) | | % | | 5 | F5.1 |
| | | 144 | Post-run system response--upscale gas | | | | 7 | F7.2 |
| | | 151 | Post-run system bias (non-dilution) or calibration error (dilution)--upscale gas (% of span) | | % | | 5 | F5.1 |
| | | 156 | Zero drift (% of span) | | % | | 5 | F5.1 |
| | | 161 | Calibration drift (% of span) | | % | | 5 | F5.1 |
| | | 166 | Stack gas density adjustment factor | | | | 5 | F5.3 |
| | | | | | | Total Record Length | 170 | |

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| MONITORING DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **REFERENCE METHOD BACKUP QA DATA** | | | | | | | | |
| Reference Method Backup Flow Rate Monitor (Run Summary)<br><br>(Modified) | 262 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Reference method component ID | | | | 3 | A3 |
| | | 13 | Reference method monitoring system ID | | | | 3 | A3 |
| | | 16 | Run date | | YYMMDD | | 6 | I6 |
| | | 22 | Run hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Number of traverse points | | | | 2 | I2 |
| | | 26 | (Square root of $\Delta P)_{avg.}$ | | in. $H_2O$ | | 5 | F5.2 |
| | | 31 | $T_s$, stack temperature | | °F | | 4 | I4 |
| | | 35 | $P_{bar}$, barometric pressure, in. Hg | | in. Hg | | 5 | F5.2 |
| | | 40 | $P_g$, stack static pressure, in. $H_2O$ | | in. $H_2O$ | | 5 | F5.2 |
| | | 45 | % $CO_2$ in stack gas, dry basis | | % | | 5 | F5.2 |
| | | 50 | % $O_2$ in stack gas, dry basis | | % | | 5 | F5.2 |
| | | 55 | % moisture in stack gas | | % $H_2O$ | | 5 | F5.2 |
| | | 60 | $M_d$, stack gas molecular weight, dry basis | | lbs/lbs-mole | | 5 | F5.2 |
| | | 65 | $M_s$, stack gas molecular weight, wet basis | | lbs/lbs-mole | | 5 | F5.2 |
| | | 70 | Pitot tube or probe coefficient | | | | 5 | F5.3 |
| | | 75 | Date of latest pitot tube or probe calibration | | YYMMDD | | 6 | I6 |
| | | 81 | $A_s$, stack or duct cross-sectional area at test port | | $ft^2$ | | 6 | F6.1 |
| | | 87 | Total volumetric flow rate | | scfh | | 10 | I10 |
| | | 97 | Average axial velocity | | ft/sec | | 8 | F8.3 |
| | | 105 | Reference method probe type | | | | 3 | A3 |
| | | | | | Total Record Length | | 107 | |

## TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **UNIT OPERATING AND CUMULATIVE EMISSIONS DATA** | | | | | | | | |
| Unit Operating Parameters (Modified) | 300 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | Unit operating time | | | 0.00-1.00 | 4 | F4.2 |
| | | 22 | Gross unit load during unit operation | | MWe | | 6 | I6 |
| | | 28 | Steam load during unit operation | | 1000 lb/hr | | 6 | I6 |
| | | 34 | Operating load range corresponding to gross load during unit operation | | | 01-20 | 2 | I2 |
| | | 36 | Hourly heat input rate during unit operation for all fuels | | mmBtu/hr | | 7 | F7.1 |
| | | 43 | Heat input formula ID | | | | 3 | A3 |
| | | 46 | F-factor for heat input calculation | CEMS Only | | | 10 | F10.1 |
| | | 56 | Use of diluent cap for heat input calculation for this hour (Y-cap used) | CEMS Only | | Y | 1 | A1 |
| | | 57 | Total heat input for the hour | Optional | mmBtu | | 7 | F7.1 |
| | | | | | | Total Record Length | 63 | |
| Quarterly Cumulative Emissions Data (Modified) **ARP Only** | 301 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Date of report generation | | YYMMDD | | 6 | I6 |
| | | 16 | Quarterly $SO_2$ tons emitted | | ton | | 10 | F10.1 |
| | | 26 | Cumulative annual $SO_2$ tons emitted | | ton | | 10 | F10.1 |
| | | 36 | Quarterly average $NO_x$ emission rate | | lb/mmBtu | | 13 | F13.3 |
| | | 49 | Cumulative annual average $NO_x$ emission rate | | lb/mmBtu | | 13 | F13.3 |
| | | 62 | Quarterly $CO_2$ tons emitted | | ton | | 10 | F10.1 |
| | | 72 | Cumulative annual $CO_2$ tons emitted | | ton | | 10 | F10.1 |
| | | 82 | Quarterly total heat input | | mmBtu | | 10 | I10 |
| | | 92 | Cumulative annual total heat input | | mmBtu | | 10 | I10 |
| | | 102 | Reserved | | | | 6 | |
| | | 108 | Reserved | | | | 6 | |
| | | 114 | Quarterly unit/stack/pipe operating hours | | hr | | 4 | I4 |
| | | 118 | Cumulative annual unit/stack/pipe operating hours | | hr | | 4 | I4 |
| | | | | | | Total Record Length | 121 | |

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **UNIT OPERATING AND CUMULATIVE EMISSIONS DATA** | | | | | | | | |
| Oil Fuel Flow (Modified) | 302 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Mass flow rate of oil during oil combustion | | lb/hr | | 10 | F10.1 |
| | | 31 | Source of data code for mass oil flow rate [8] | | | 0-6,8,9 | 1 | I1 |
| | | 32 | Operating load range corresponding to gross load | | | 01-20 | 2 | I2 |
| | | 34 | Gross calorific value (GCV) of oil | | | | 10 | F10.1 |
| | | 44 | Source of data code for GCV of oil [9] | OTC only | | 0,1 | 1 | I1 |
| | | 45 | Heat input rate from oil during oil combustion | | mmBtu/hr | | 7 | F7.1 |
| | | 52 | Fuel usage time | | | 0.01-1.00 | 4 | F4.2 |
| | | 56 | Type of oil [10] | | | | 3 | A3 |
| | | 59 | Volumetric flow rate of oil during oil combustion | | | | 10 | F10.1 |
| | | 69 | Units of measure for volumetric oil flow rate [11] | | | | 5 | A5 |
| | | 74 | Source of data code for volumetric oil flow rate[8] | | | 0,1,3-7 | 1 | I1 |
| | | 75 | Density of oil | | | | 8 | F8.5 |
| | | 83 | Units of measure for density of oil [11] | | | | 5 | A5 |
| | | 88 | Source of data code for density of oil [12] | OTC only | | 0,1 | 1 | I1 |
| | | 89 | Flag to indicate multiple or single fuel types combusted (M-multiple, S-single) | | | M,S | 1 | A1 |
| | | 90 | Type of oil sampling and GCV value used in calculations [12] | | | | 2 | I2 |
| | | 92 | Type of oil sampling and density value used in calculations [12] | | | | 2 | I2 |
| | | | | | Total Record Length | | 93 | |

[8] 0 = Measured data
1 = Substitute data using load-based procedures
2 = Mass from volumetric measurement
3 = Maximum fuel flow rate (Missing data purposes only. This value should also be used for OTC NBP units using long term fuel flow missing data procedures.)
4 = Emergency fuel (maximum unit fuel flow rate)
5 = Ignitor oil from tank measurements
6 = Uncertified OFFM to measure ignitor oil
7 = Prorated long-term volumetric fuel measurement (OTC NBP only)
8 = Prorated long-term mass fuel measurement (OTC NBP only)

[9] 0 = Measured
1 = Missing data substitution

[10] See instructions for allowable codes.

[11] Limited to a Table of Codes: VOLUMETRIC OIL FLOW: SCFH (scf/hr); GALHR (gal/hr); BBLHR (barrels/hr), M3HR ($m^3$/hr)
DENSITY: LBSCF (lb/scf); LBGAL (lb/gal); LBBBL (lb/barrel), LBM3 (lb/$m^3$)

[12] Type of oil sampling and value used:
0 = Actual measured value from daily manual sample
1 = Actual measured value from flow proportional/weekly composite sample
2 = Actual measured value from oil tank sample
4 = Highest sampled value in previous calendar year from oil tank sampling
5 = Highest sampled value in previous calendar year from as delivered sample
6 = Maximum value allowed by contract (only if higher than measured oil tank sample)
7 = Maximum value allowed by contract (only if higher than measured oil as delivered sample)
8 = Missing data (maximum potential value from Table D-6)
9 = LME GCV/Density Default
10 = Highest sampled value in previous 30 days

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **UNIT OPERATING AND CUMULATIVE EMISSIONS DATA** | | | | | | | | |
| Gas Fuel Flow (Modified) | 303 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Flow rate of gas during gas combustion | | 100 scfh | | 10 | F10.1 |
| | | 31 | Source of data code for gas flow rate [13] | | | 0-3,7,9 | 1 | I1 |
| | | 32 | Operating load range corresponding to gross load | | | 01-20 | 2 | I2 |
| | | 34 | Gross calorific value (GCV) of gas | | Btu/100 scf | | 10 | F10.1 |
| | | 44 | Source of data code for GCV [9] | OTC only | | 0,1 | 1 | I1 |
| | | 45 | Heat input rate from gas during gas combustion | | mmBtu/hr | | 7 | F7.1 |
| | | 52 | Fuel usage time | | | 0.01-1.00 | 4 | F4.2 |
| | | 56 | Type of gas [10] | | | | 3 | A3 |
| | | 59 | Flag to indicate multiple or single fuel types combusted (M-multiple, S-single fuel) | | | M,S | 1 | A1 |
| | | 60 | Type of gas sampling and GCV value used in calculations [14] | | | 0-10 | 2 | I2 |
| | | | | | Total Record Length | | 61 | |
| Quarterly Heat Input From Long Term Fuel Flow Measurements for Qualifying Low Mass Emission Units (New) | 305 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Type of fuel [10] | | | | 3 | A3 |
| | | 16 | Quarter or reporting period | | | 1-4, 2A,2S | 2 | A2 |
| | | 18 | Year | | YYYY | | 4 | I4 |
| | | 22 | Quarterly or reporting period fuel flow | | | | 10 | I10 |
| | | 32 | Units of measure for fuel flow [15] | | | | 5 | A5 |
| | | 37 | Gross calorific value | | | | 10 | F10.1 |
| | | 47 | Gross calorific value units of measure [16] | | | | 8 | A8 |
| | | 55 | Total heat input | | mmBtu | | 10 | I10 |
| | | | | | Total Record Length | | 64 | |

[13] 0 = Hourly measurement
1 = Substitute data using load based procedures
3 = Maximum fuel flow rate (OTC NBP only long term fuel flow missing data procedures)
7 = Prorated long term fuel measurement (OTC NBP only)
9 = Value reported but not used for hourly heat input (OTC NBP only)

[14] Type of gas sampling and value:
0 = Actual measured GCV from most recent monthly sampling
1 = Highest of all sampled values in previous calendar year
2 = Maximum Value allowed by contract (if higher than monthly sample)
3 = Highest GCV in previous 30 daily samples
4 = Actual measured GCV from continuous (hourly) sampling
5 = Gas fuel in lots, as delivered sampling: highest of all sampled values in previous calendar year
6 = Gas fuel in lots, as delivered sampling: maximum value allowed by contract (if higher than most recent as delivered sample)
7 = Actual measured GCV from daily sampling
8 = Missing data based on Table D-6 default
9 = LME/GCV Default
10 = Actual GCV from most recent shipment or lot

[15] Limited to a table of codes: LB, SCF, GAL

[16] Limited to a table of codes: BTU/LB, BTU/SCF, BTU/GAL

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **UNIT OPERATING AND CUMULATIVE EMISSIONS DATA** | | | | | | | | |
| Cumulative $NO_x$ Mass Emissions Data (New) **ARP LME and Subpart H Only** | 307 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Date of report generation | | YYYYMMDD | | 8 | I8 |
| | | 18 | Reporting period $NO_x$ tons emitted | | ton | | 10 | F10.1 |
| | | 28 | Cumulative ozone season $NO_x$ tons emitted | | ton | | 10 | F10.1 |
| | | 38 | Reporting period heat input | | mmBtu | | 10 | F10.1 |
| | | 48 | Cumulative ozone season heat input | | mmBtu | | 10 | F10.1 |
| | | 58 | Total reporting period operating hours | | hr | | 4 | I4 |
| | | 62 | Cumulative ozone season operating hours | | hr | | 5 | I5 |
| | | 67 | Cumulative annual $NO_x$ tons emitted | | ton | | 10 | F10.1 |
| | | 77 | Cumulative annual total heat input | Subpart H only | mmBtu | | 10 | I10 |
| | | 87 | Cumulative annual unit/stack/pipe operating hours | Subpart H only | hr | | 4 | I4 |
| | | | | | | Total Record Length | 90 | |
| **SO2 MASS EMISSIONS DATA** | | | | | | | | |
| $SO_2$ Mass Emissions Data (Modified) **ARP Only** | 310 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | $SO_2$ mass emission rate for the hour | | lb/hr | | 7 | F7.1 |
| | | 25 | $SO_2$ mass emission rate during unit operation based on adjusted values | | lb/hr | | 7 | F7.1 |
| | | 32 | Formula ID from monitoring plan for hourly $SO_2$ emissions | | | | 3 | A3 |
| | | 35 | Total $SO_2$ mass emissions for the hour | Optional | lb | | 7 | F7.1 |
| | | | | | | Total Record Length | 41 | |

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

## UNIT DATA

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | FIELD NOTES | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|---|
| **SO2 MASS EMISSIONS DATA** | | | | | | | | |
| $SO_2$ Mass Emissions Alternative Estimation Parameters for Oil (Modified) **ARP Only** | 313 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Sulfur content of oil sample used to calculate $SO_2$ mass emission rate | | % | .01-5.0 | 5 | F5.2 |
| | | 26 | Reserved | | | | 3 | |
| | | 29 | Reserved | | | | 1 | |
| | | 30 | $SO_2$ mass emission rate from oil during oil combustion | | lb/hr | | 7 | F7.1 |
| | | 37 | Total $SO_2$ mass emissions from oil | Optional | lb | | 7 | F7.1 |
| | | 44 | Type of sulfur sampling and value used in calculations [17] | | | 0-8 | 2 | I2 |
| | | | | | Total Record Length | | 45 | |
| $SO_2$ Mass Emissions Alternative Estimation Parameters for Gas (Modified) **ARP Only** | 314 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Sulfur content of gas sample used to calculate $SO_2$ mass emission rate | | grains/100 scf | | 8 | F8.1 |
| | | 29 | Reserved | | | | 1 | |
| | | 30 | Default $SO_2$ emission rate | | lb/mmBtu | | 7 | F7.5 |
| | | 37 | $SO_2$ mass emission rate from gas during gas combustion | | lb/hr | | 8 | F8.5 |
| | | 45 | Total $SO_2$ mass emissions from gas | Optional | lb | | 7 | F7.1 |
| | | 52 | Type of sulfur sampling and value used in calculations [17] | | | 0,3,5, 7-10 | 2 | I2 |
| | | | | | Total Record Length | | 53 | |

[17] Type of data for sulfur content:
0 = Actual measured hourly average sample from GCH
1 = Actual measured value from oil composite sample
2 = Actual measured value from oil tank sample
3 = Highest daily sample in 30 daily samples (gas or oil)
4 = Highest sampled value in previous calendar year from oil tank sampling
5 = Highest sampled value in previous calendar year from a delivered sample (gas or oil)
6 = Maximum value allowed by contract (only if higher than measured oil tank sample)
7 = Maximum value allowed by contract (only if higher than measured gas or oil as delivered sample)
8 = Missing Data (maximum potential value from Table D-6 for oil or gas)
9 = Actual measured value from daily sample
10 = Actual measured value from most recent shipment or lot (gas)

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **$NO_x$ EMISSIONS DATA** | | | | | | | | |
| $NO_x$ Emission Rate Data | 320 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Percent monitor data availability for $NO_x$ emission rate calculations | | % | 0.0-100.0 | 5 | F5.1 |
| | | 26 | F-factor converting $NO_x$ concentrations to emission rates | | | | 10 | F10.1 |
| | | 36 | Average $NO_x$ emission rate for the hour | | lb/mmBtu | | 6 | F6.3 |
| | | 42 | Adjusted average $NO_x$ emission rate for the hour | | lb/mmBtu | | 6 | F6.3 |
| | | 48 | Operating load range corresponding to gross load for the hour | | | 01-10 | 2 | I2 |
| | | 50 | Formula ID from monitoring plan for hourly $NO_x$ emission rate | | | | 3 | A3 |
| | | 53 | Method of determination code[5] | | | 01-12, 14,21,23, 25,54,55 | 2 | I2 |
| | | | | | Total Record Length | | 54 | |
| $NO_x$ Emission Rate Alternative Estimation Parameters for Oil and Gas (Modified) | 323 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date | | YYMMDD | | 6 | I6 |
| | | 19 | Hour | | HH | 00-23 | 2 | I2 |
| | | 21 | Parameters status flag (Y-in spec, N-out of spec, X-parameters data missing or invalid, W-operation above highest tested heat input point, Z-operation below lowest tested heat input point) | | | Y,N,X, W,Z | 1 | A1 |
| | | 22 | Average $NO_x$ emission rate for the hour | | lb/mmBtu | | 6 | F6.3 |
| | | 28 | Reserved | | | | 6 | |
| | | 34 | Reserved | | | | 6 | |
| | | 40 | Segment ID of correlation curve | | | | 3 | A3 |
| | | | | | Total Record Length | | 42 | |

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **$NO_x$ EMISSIONS DATA** | | | | | | | | |
| $NO_x$ Emission Rate Estimation Based on Appendix E<br><br>(New) | 324 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | $NO_x$ monitoring system ID | | | | 3 | A3 |
| | | 13 | Fuel flow monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Parameters status flag (Y-in spec, N-out of spec, X-parameters data missing or invalid, W-operation above highest tested heat input point, Z-operation below lowest tested heat input point) | | | Y,N,X, W,Z | 1 | A1 |
| | | 25 | Average $NO_x$ emission rate for the hour for fuel type | | lb/mmBtu | | 6 | F6.3 |
| | | 31 | $NO_x$ mass emission rate for the hour for fuel type | | lb/hr | | 11 | F11.2 |
| | | 42 | Segment ID of correlation curve | | | | 3 | A3 |
| | | 45 | Flag to indicate multiple or single fuel types combusted (M-multiple, S-single) | | | M,S | 1 | A1 |
| | | | | | Total Record Length | | 45 | |
| $NO_x$ Emission Rate Estimation Based on Appendix E for Multiple Fuel Hours<br><br>(New) | 325 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | Average $NO_x$ emission rate for all fuels during multiple fuel hours | | lb/mmBtu | | 6 | F6.3 |
| | | | | | Total Record Length | | 23 | |
| $NO_x$ Mass Emissions<br><br>(New)<br><br>**Subpart H Only** | 328 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | Unit operating time | | | 0.00-1.00 | 4 | F4.2 |
| | | 22 | $NO_x$ mass emission rate during unit operation | Optional | lb/hr | | 10 | F10.1 |
| | | 32 | Total $NO_x$ mass emissions for the hour | | lb | | 10 | F10.1 |
| | | 42 | Formula ID from monitoring plan for total $NO_x$ mass | | | | 3 | A3 |
| | | 45 | $NO_x$ methodology for the hour [10] | | | | 10 | A10 |
| | | 55 | Heat input rate methodology for the hour [10] | | | | 10 | A10 |
| | | | | | Total Record Length | | 64 | |

# TABLE 4: QUARTERLY EMISSION DATA FILE RECORD STRUCTURES

| UNIT DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **CO2 MASS EMISSIONS DATA** | | | | | | | | |
| $CO_2$ Mass Emissions Data (Modified) **ARP Only** | 330 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | $CO_2$ mass emission rate for the hour | | ton/hr | | 10 | F10.1 |
| | | 28 | Formula ID from monitoring plan for hourly $CO_2$ mass emission rate | | | | 3 | A3 |
| | | 31 | Reserved | | | | 2 | |
| | | 33 | Total $CO_2$ mass emissions for the hour | Optional | ton | | 10 | F10.1 |
| | | 43 | Use of diluent cap value for $CO_2$ calculation for this hour (Y-cap used) | CEMS only | | Y | 1 | A1 |
| | | | | | Total Record Length | | 43 | |
| $CO_2$ Mass Emissions Estimation Parameters **ARP Only** | 331 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Total daily combustion-related $CO_2$ mass emissions adjusted for $CO_2$ retained in flyash | | ton | | 10 | F10.1 |
| | | 26 | Total daily sorbent-related $CO_2$ mass emissions | | ton | | 10 | F10.1 |
| | | 36 | Total daily $CO_2$ mass emissions | | ton | | 10 | F10.1 |
| | | | | | Total Record Length | | 45 | |
| **QUALIFYING LOW MASS EMISSIONS UNIT DATA** | | | | | | | | |
| Hourly Emissions Data for Qualifying Low Mass Emissions Units (New) **LME Only** | 360 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Date | | YYMMDD | | 6 | I6 |
| | | 16 | Hour | | HH | 00-23 | 2 | I2 |
| | | 18 | Unit operating time [18] | | | 0.0-1.00 | 4 | F4.2 |
| | | 22 | Gross unit load during unit operation | | MWe | | 6 | I6 |
| | | 28 | Steam load | | 1000 lb/hr | | 6 | I6 |
| | | 34 | Total hourly heat input (from all fuels) | | mmBtu | | 7 | F7.1 |
| | | 41 | Fuel type [19] | | | | 3 | A3 |
| | | 44 | $SO_2$ mass emissions | ARP only | lb | | 6 | F6.1 |
| | | 50 | $NO_x$ mass emissions | | lb | | 6 | F6.1 |
| | | 56 | $CO_2$ mass emissions | ARP only | ton | | 9 | F9.1 |
| | | 65 | Control status (C-controlled, U-uncontrolled) | | | C,U | 1 | A1 |
| | | 66 | $NO_x$ methodology for the hour [10] | | | | 10 | A10 |
| | | 76 | Heat input rate methodology for the hour [10] | | | | 10 | A10 |
| | | | | | Total Record Length | | 85 | |

[18] For LME units using long term fuel flow and reporting RT 305, report 1.00 for each hour in which any operation occurred.

[19] See instructions for allowable codes. If multiple fuels are burned, report the fuel used to determine mass emissions (fuel with the highest $SO_2$, $CO_2$, and/or $NO_x$ emission factor). See §§ 75.19(c)(3)(i), (4)(i), and (5)(i).

## TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Stack/Pipe Header Definition Table (Modified) | 503 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Stack/Pipe description or name | | | | 20 | A20 |
| | | 30 | Unit ID for associated unit | | | | 6 | A6 |
| | | 36 | Reserved | | | | 1 | |
| | | 37 | Reserved | | | | 6 | |
| | | 43 | Reserved | | | | 6 | |
| | | 49 | Activation date | | YYMMDD | | 6 | I6 |
| | | 55 | Retirement date | | YYMMDD | | 6 | I6 |
| | | 61 | Bypass stack flag (B-bypass) | | | B | 1 | A1 |
| | | 62 | Stack exit height above ground level | | ft | | 4 | I4 |
| | | 66 | Ground level elevation above sea level | | ft | | 5 | I5 |
| | | 71 | Inside cross-sectional area at flue exit | | $ft^2$ | | 4 | I4 |
| | | 75 | Inside cross-sectional area at flow monitor location | | $ft^2$ | | 4 | I4 |
| | | | | | | Total Record Length | 78 | |
| Unit Information (New) | 504 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Unit type [10] | | | | 3 | A3 |
| | | 13 | Maximum hourly heat input capacity | | mmBtu | | 7 | F7.1 |
| | | 20 | Date of first commercial operation | | YYYYMMDD | | 8 | I8 |
| | | 28 | Unit retirement date | | YYYYMMDD | | 8 | I8 |
| | | 36 | Stack exit height above ground level | | ft | | 4 | I4 |
| | | 40 | Ground level elevation above sea level | | ft | | 5 | I5 |
| | | 45 | Inside cross-sectional area at flue exit | | $ft^2$ | | 4 | I4 |
| | | 49 | Inside cross-sectional area at flow monitor location | | $ft^2$ | | 4 | I4 |
| | | | | | | Total Record Length | 52 | |
| Program Indicator for Report (New) | 505 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Program/Reporting requirements for which EDR is submitted [20] | | | | 10 | A10 |
| | | 20 | Unit classification [10] | | | | 2 | A2 |
| | | 22 | Reporting frequency (OS-ozone season, Q-quarterly) | | | OS,Q | 2 | A2 |
| | | 24 | Program participation date | | YYYYMMDD | | 8 | I8 |
| | | 32 | State regulation code (per State instructions) | OTC and Subpart H only | | | 10 | A10 |
| | | 42 | State or local regulatory agency code (see instructions) | OTC and Subpart H only | | | 4 | A4 |
| | | | | | | Total Record Length | 45 | |
| EIA Cross Reference Information (New) | 506 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Acid Rain Program or Subpart H monitoring location ID | | | | 6 | A6 |
| | | 16 | EIA boiler ID | | | | 5 | A5 |
| | | 21 | EIA flue ID | | | | 5 | A5 |
| | | 26 | EIA reporting year | | | | 4 | I4 |
| | | 30 | EIA reporting indicator (N-not reporting EIA forms) | | | N | 1 | A1 |
| | | 31 | ARP/Subpart H facility/ORISPL number | | | | 6 | I6 |
| | | 37 | EIA facility number | | | | 6 | I6 |
| | | | | | | Total Record Length | 42 | |

[20] Available codes are: ARP, NBP, OTC-SUBH, SUBH, SIP

# TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Fuel Usage Data to Qualify as a Peaking Unit or an Acid Rain Program Gas-Fired Unit<br><br>(New) | 507 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Current calendar year or ozone season | | YYYY | | 4 | I4 |
| | | 14 | Ozone Season or Year 1 | | YYYY | | 4 | I4 |
| | | 18 | Ozone Season or Year 1 type (P-projected, A-actual, D-operating data) | | | P,A,D | 1 | A1 |
| | | 19 | Ozone Season or Year 1 % capacity for peaking units or % heat input for gaseous fuel | | % | 0.0-100.0 | 5 | F5.1 |
| | | 24 | Ozone Season or Year 2 | | YYYY | | 4 | I4 |
| | | 28 | Ozone Season or Year 2 type (P-projected, A-actual, D-operating data) | | | P,A,D | 1 | A1 |
| | | 29 | Ozone Season or Year 2 % capacity for peaking units or % heat input from gaseous fuel | | % | 0.0-100.0 | 5 | F5.1 |
| | | 34 | Ozone Season or Year 3 | | YYYY | | 4 | I4 |
| | | 38 | Ozone Season or Year 3 type (P-projected, A-actual, D-operating data) | | | P,A,D | 1 | A1 |
| | | 39 | Ozone Season or Year 3 % capacity for peaking units or % heat input from gaseous fuel | | % | 0.0-100.0 | 5 | F5.1 |
| | | 44 | Three ozone season or year average annual capacity for peaking units or % heat input from gaseous fuel | | % | 0.0-100.0 | 5 | F5.1 |
| | | 49 | Type of qualification (GF-gas-fired unit, PK-peaking unit, SK-ozone season peaking unit) | | | GF,PK, SK | 2 | A2 |
| | | 51 | Method of qualifying as a peaking unit or as a gas-fired unit per § 72.2 [10] | | | | 3 | A3 |
| | | | | | | Total Record Length | 53 | |
| Subpart H Reporting Frequency Change<br><br>(New)<br><br>**Subpart H Only** | 508 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Stack/Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | New reporting frequency (OS-ozone season only, Q-quarterly) | | | OS, Q | 2 | A2 |
| | | 12 | Begin date of new reporting frequency | | YYYYMMDD | | 8 | I8 |
| | | 20 | [Reserved] | | | | 8 | |
| | | 28 | [Reserved] | | | | 1 | |
| | | | | | | Total Record Length | 28 | |
| Monitoring Systems/ Analytical Components Table<br><br>(Modified) | 510 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Status (A-add, C-correct, D-delete, U-unchanged) | | | A,C,D,U | 1 | A1 |
| | | 17 | System parameter monitored [21] | | | | 4 | A4 |
| | | 21 | Primary/backup designation [22] | | | | 2 | A2 |
| | | 23 | Component type code [23] | | | | 4 | A4 |
| | | 27 | Sample acquisition method [10] | | | | 3 | A3 |
| | | 30 | Manufacturer | | | | 25 | A25 |
| | | 55 | Model/version | | | | 15 | A15 |
| | | 70 | Serial number | | | | 20 | A20 |
| | | 90 | Reserved | | | | 6 | |
| | | 96 | Reserved | | | | 4 | |
| | | 100 | First date system reported data | | YYYYMMDD | | 8 | I8 |
| | | 108 | Last date system reported data | | YYYYMMDD | | 8 | I8 |
| | | | | | | Total Record Length | 115 | |

[21] Limited to a table of codes: System Parameter: CO2, FLOW, GAS, H2O, LTGS, LTOL, NOX, NOXC, O2, OILM, OILV, OP, SO2

[22] Limited to a table of codes: Primary/Backup Designation: P-primary, B-regular non-redundant backup, DB-data backup, RB-redundant backup, RM-reference method backup

[23] Limited to a table of codes: Component Type: BGFF, BOFF, CALR, CO2, CO2A, CO2H, CO2L, DAHS, DL, DP, FLC, FLOW, GCH, GFFM, H2O, NOX, NOXA, NOXH, NOXL, O2D, O2DA, O2DH, O2DL, O2W, O2WA, 02WD, O2WH, O2WL, OFFM, OP, PLC, PRB, PRES, SO2, SO2A, SO2H, SO2L, TEMP

## TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Formula Table | 520 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Submission status (A-add, C-correct, D-delete, U-unchanged) | | | A,C,D,U | 1 | A1 |
| | | 11 | Formula ID | | | | 3 | A3 |
| | | 14 | Parameter monitored [10] | | | | 4 | A4 |
| | | 18 | Formula code [10] | | | | 5 | A5 |
| | | 23 | Formula text | | | | 200 | A200 |
| | | | | | | Total Record Length | 222 | |
| Span Table (Modified) | 530 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Parameter monitored [10] | | | | 4 | A4 |
| | | 14 | Scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | 15 | Method for calculating MPC/MEC/MPF (F-formula, HD-historical data, OL-other limit, TR-test results, TB-table in Part 75, GS-gas fired only) | | | F,HD, OL,TR, TB,GS | 2 | A2 |
| | | 17 | MPC/MEC/MPF [24] | | | | 13 | F13.3 |
| | | 30 | Maximum potential $NO_x$ emission rate | | lb/mmBtu | | 6 | F6.3 |
| | | 36 | Span value in units of daily calibration | | | | 13 | F13.3 |
| | | 49 | Full scale range in units of daily calibration | | | | 13 | F13.3 |
| | | 62 | Daily calibration units of measure [25] | | | | 5 | A5 |
| | | 67 | Reserved | | | | 1 | |
| | | 68 | Span effective date | | YYMMDD | | 6 | I6 |
| | | 74 | Span effective hour | | HH | | 2 | I2 |
| | | 76 | Span inactivation date | | YYMMDD | | 6 | I6 |
| | | 82 | Span inactivation hour | | HH | | 2 | I2 |
| | | 84 | Dual spans required (D-dual ranges required/installed, O-dual ranges required/use of optional default value elected) (Blank if not applicable) | | | D,O | 1 | A1 |
| | | 85 | Default high range value | | | | 5 | I5 |
| | | 90 | Flow rate span value in SCFH | | scfh | | 9 | I9 |
| | | 99 | Flow rate full scale value in SCFH | | scfh | | 9 | I9 |
| | | | | | | Total Record Length | 107 | |

[24] Provide $SO_2$ and $NO_x$ MPC/MEC in ppm, rounded to the nearest whole number. Provide $CO_2$ MPC in %. Provide flow maximum potential flowrate (MPF) in scfh.

[25] For $SO_2$ and $NO_x$ use PPM. For $CO_2$ or $O_2$ use %. For flow use units corresponding to calibration as follows: ACFH, ACFM, AFPM, INH20, KACFH, KACFM, KAFPM, KSCFH, KSCFM, KSFPM, MACFH, MSCFH, SCFH, SCFM, SFPM.

# TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Maximums, Minimums, Defaults and Constants<br><br>(New) | 531 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Parameter [10] | | | | 4 | A4 |
| | | 14 | Value of default, maximum, minimum or constant | | | | 13 | F13.3 |
| | | 27 | Units of measure [26] | | | | 7 | A7 |
| | | 34 | Purpose or intended use [10] | | | | 3 | A3 |
| | | 37 | Type of fuel [10] | | | | 3 | A3 |
| | | 40 | Indicator of use for controlled/uncontrolled hours (A-any hour, C-controlled, U-uncontrolled) | | | A,C,U | 1 | A1 |
| | | 41 | Source of value [10] | | | | 4 | A4 |
| | | 45 | Value effective date | | YYYYMMDD | | 8 | I8 |
| | | 53 | Value effective hour | | HH | | 2 | I2 |
| | | 55 | Value no longer effective date | | YYYYMMDD | | 8 | I8 |
| | | 63 | Value no longer effective hour | | HH | | 2 | I2 |
| | | 65 | $SO_2$ emission factor for low mass emissions units | ARP only | lb/mmBtu | | 6 | F6.4 |
| | | | | | | Total Record Length | 70 | |
| Unit and Stack Operating Load Data<br><br>(New) | 535 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Load units (MW-MWe, ST-1000lb steam) | | | MW,ST | 2 | A2 |
| | | 12 | Maximum hourly gross load | | | | 6 | I6 |
| | | 18 | Designated normal load | OTC only | | L,M,H | 1 | A1 |
| | | 19 | Single load testing only (for flow RATA or, for OTC only, heat input RATA) (P-peaking unit, B-bypass stack, and, for OTC only, S-single load test approved by State) | | | B,P,S | 1 | A1 |
| | | | | | | Total Record Length | 19 | |
| Range of Operation, Normal Load, and Load Usage<br><br>(New) | 536 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Upper boundary of range of operation | | MWe, 1000 lb/hr | | 6 | I6 |
| | | 16 | Lower boundary of range of operation | | MWe, 1000 lb/hr | | 6 | I6 |
| | | 22 | Two most frequently-used load levels | | | L,M,H | 3 | A3 |
| | | 25 | Designated normal load | | | L,M,H | 1 | A1 |
| | | 26 | Second designated normal load | Optional | | L,M,H | 1 | A1 |
| | | 27 | Date of historical load analysis (activation date) | | YYYYMMDD | | 8 | I8 |
| | | 35 | Inactivation date | | YYYYMMDD | | 8 | I8 |
| | | | | | | Total Record Length | 42 | |

[26] Limited to a table of codes: %, %H20, BBLHR, BTUHSCF, BTULB, BTUHR, GALHR, HSCF, LB, LBBBL, LBGAL, LBHR, LBM3, LBMMBTU, LBSCF, M3HR, MMBTU, MMBTUHR, MMBTULB, PPM, SCFH, MMBTUMW, TNMMBTU

# TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Fuel Flowmeter Data (Modified) | 540 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Parameter monitored | | | GAS, LTGS, LTOL, OILM, OILV | 4 | A4 |
| | | 17 | Type of fuel [10] | | | | 3 | A3 |
| | | 20 | Maximum system fuel flow rate | | | | 10 | F10.1 |
| | | 30 | Units of measure for maximum fuel flow rate [27] | | | | 5 | A5 |
| | | 35 | Source of maximum rate (URV-upper range value, UMX-unit max) | | | URV, UMX | 3 | A3 |
| | | 38 | Initial accuracy test method | | | | 11 | A11 |
| | | 49 | Reserved | | | | 11 | |
| | | 60 | Submission status (A-add, C-correct, D-delete, U-unchanged) | | | A,C,D,U | 1 | A1 |
| | | | | | Total Record Length | | 60 | |
| Reasons for Monitoring System Downtime or Missing Parameter (Optional) | 550 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Parameter [10] | | | | 4 | A4 |
| | | 14 | Monitoring system ID | | | | 3 | A3 |
| | | 17 | Begin date | | YYMMDD | | 6 | I6 |
| | | 23 | Begin hour | | HH | 00-23 | 2 | I2 |
| | | 25 | End date | | YYMMDD | | 6 | I6 |
| | | 31 | End hour | | HH | 00-23 | 2 | I2 |
| | | 33 | Missing data reason code [10] | | | 1-99 | 2 | I2 |
| | | 35 | Missing data description [28] | | | | 75 | A75 |
| | | 110 | Corrective action description | | | | 75 | A75 |
| | | | | | Total Record Length | | 184 | |
| Monitoring System Re-certification, Maintenance, or Other Events (New) | 556 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Event code [10] | | | 1-999 | 3 | I3 |
| | | 19 | Code for required test [10] | | | 1-99 | 2 | I2 |
| | | 21 | Date of event | | YYYYMMDD | | 8 | I8 |
| | | 29 | Hour of event | | HH | 00-23 | 2 | I2 |
| | | 31 | Beginning of conditionally valid period (probationary calibration error test) date | | YYYYMMDD | | 8 | I8 |
| | | 39 | Beginning of conditionally valid period (probationary calibration error test) hour | | HH | 00-23 | 2 | I2 |
| | | 41 | Date that last test is successfully completed | | YYYYMMDD | | 8 | I8 |
| | | 49 | Hour that last test is successfully completed | | HH | 00-23 | 2 | I2 |
| | | 51 | Indicator that conditionally valid data were reported at end of quarter | | | C | 1 | A1 |
| | | | | | Total Record Length | | 51 | |

[27] For volumetric flow meters for oil use SCFH (scf/hr); GALHR (gal/hr); BBLHR (barrels/hr); M3HR ($M^3$/hr).
For mass of oil flow meters use LBHR.
For gas flow meters use HSCF (for 100 scfh).

[28] Optional field. Provide information if code does not adequately explain reason or event or if code 99 (OTHER) is used.

# TABLE 5: MONITORING PLAN FILE RECORD STRUCTURES

| MONITORING PLAN INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Appendix E $NO_x$ Correlation Curve Segments (New) | 560 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Test date | | YYYYMMDD | | 8 | I8 |
| | | 18 | Test number | | | | 2 | I2 |
| | | 20 | Operating level | | | 0-99 | 2 | I2 |
| | | 22 | Segment ID | | | | 3 | A3 |
| | | 25 | $NO_x$ monitoring system ID | | | | 3 | A3 |
| | | 28 | Heat input rate #1 (low) | | mmBtu/hr | | 7 | F7.1 |
| | | 35 | Heat input rate #2 (high) | | mmBtu/hr | | 7 | F7.1 |
| | | 42 | $NO_x$ emission rate #1 | | lb/mmBtu | | 6 | F6.3 |
| | | 48 | $NO_x$ emission rate #2 | | lb/mmBtu | | 6 | F6.3 |
| | | 54 | Type of fuel [10] | | | | 3 | A3 |
| | | 57 | Identical unit group ID (if applicable) | OTC only | | | 8 | A8 |
| | | | | | | Total Record Length | 64 | |
| Monitoring Methodology Information (New) | 585 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Parameter [10] | | | | 4 | A4 |
| | | 14 | Monitoring methodology [10] | | | | 10 | A10 |
| | | 24 | Type of fuel associated with methodology [10] | | | | 3 | A3 |
| | | 27 | Primary/secondary methodology indicator | | | P,S | 1 | A1 |
| | | 28 | Missing data approach for methodology [10] | | | | 6 | A6 |
| | | 34 | Methodology start date | | YYYYMMDD | | 8 | I8 |
| | | 42 | Methodology end date | | YYYYMMDD | | 8 | I8 |
| | | | | | | Total Record Length | 49 | |
| Control Equipment Information (New) | 586 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Parameter (NOX, SO2, PART) | | | | 4 | A4 |
| | | 14 | Control equipment code [10] | | | | 6 | A6 |
| | | 20 | Primary/secondary controls indicator | | | P,S | 1 | A1 |
| | | 21 | Original installation (O-original) | | | O | 1 | A1 |
| | | 22 | Controls install date | | YYYYMMDD | | 8 | I8 |
| | | 30 | Controls optimization date | | YYYYMMDD | | 8 | I8 |
| | | 38 | Controls retirement date | | YYYYMMDD | | 8 | I8 |
| | | 46 | Seasonal controls indicator(S-ozone season only) | OTC and Subpart H only | | S | 1 | A1 |
| | | | | | | Total Record Length | 46 | |
| Unit Fuel Type (New) | 587 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Fuel types combusted [10] | | | | 3 | A3 |
| | | 13 | Fuel type start date | | YYYYMMDD | | 8 | I8 |
| | | 21 | Fuel type end date | | YYYYMMDD | | 8 | I8 |
| | | 29 | Primary/secondary/emergency/startup fuel indicator | | | E,I,P,S | 1 | A1 |
| | | 30 | Ozone season fuel switching flag (S-burned during ozone season for ozone control) | OTC and Subpart H only | | S | 1 | A1 |
| | | 31 | Demonstration method to qualify for monthly fuel sampling for GCV | | | GHS, GGC, GOC | 3 | A3 |
| | | 34 | Demonstration method to qualify for daily fuel sampling for %S | ARP only | | SHS, SGC | 3 | A3 |
| | | | | | | Total Record Length | 36 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **CALIBRATION/ERROR TESTS** | | | | | | | | |
| 7-Day Calibration Error Test Data and Results (Modified) | 600 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Instrument span | | | | 13 | F13.3 |
| | | 37 | Reference value | | | | 13 | F13.3 |
| | | 50 | Measured value | | | | 13 | F13.3 |
| | | 63 | Results (calibration error or \|R-A\|) | | %, ppm | 0.0-100.0 | 5 | F5.1 |
| | | 68 | Alternative performance specification (APS) flag [7] | | | 0,1 | 1 | I1 |
| | | 69 | Reference signal or calibration gas level (Z-zero, M-mid, H-high) | | | Z,M,H | 1 | A1 |
| | | 70 | Span scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | 71 | Test number | | | | 2 | I2 |
| | | 73 | Reason for test (C-initial cert, D-diagnostic, R-recert) | | | C,D,R | 2 | A2 |
| | | | | | | Total Record Length | 74 | |
| **LINEARITY CHECKS** | | | | | | | | |
| Linearity Check Data (Modified) | 601 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Time | | HHMM | 0000-2359 | 4 | I4 |
| | | 26 | Instrument span | | | | 13 | F13.3 |
| | | 39 | Reference value | | | | 13 | F13.3 |
| | | 52 | Measured value | | | | 13 | F13.3 |
| | | 65 | Calibration gas level (Z-zero, L-low, M-mid, H-high) | | | Z,L,M,H | 1 | A1 |
| | | 66 | Span scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | 67 | Test number | | | | 2 | I2 |
| | | 69 | Indicator of aborted test (A-aborted test) | | | A | 1 | A1 |
| | | | | | | Total Record Length | 69 | |
| Linearity Check Results (Modified) | 602 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Instrument span | | | | 13 | F13.3 |
| | | 35 | Mean of reference values | | | | 13 | F13.3 |
| | | 48 | Mean of measured values | | | | 13 | F13.3 |
| | | 61 | Results (linearity error or \|R-A\|) | | %, ppm | 0.0-100.0 | 5 | F5.1 |
| | | 66 | Alternative performance specification (APS) flag [7] | | | 0,1 | 1 | I1 |
| | | 67 | Reserved | | | | 4 | |
| | | 71 | Calibration gas level (Z-zero, L-low, M-mid, H-high) | | | Z,L,M,H | 1 | A1 |
| | | 72 | Span scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | 73 | Test number | | | | 2 | I2 |
| | | 75 | Reason for test (C-initial cert, D-diagnostic, R-recert, Q-QA, G-grace period QA) | | | C,D,R,Q, RG,RQ,G | 2 | A2 |
| | | | | | | Total Record Length | 76 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **LEAK CHECKS** | | | | | | | | |
| Flow Leak Check Results (Modified) | 603 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Status (P-pass, F-fail) | | | P,F | 1 | A1 |
| | | 25 | Reserved | | | | 4 | |
| | | 29 | Reason for test (D-diagnostic, Q-QA, G-grace period QA) | | | D,Q,G | 2 | A2 |
| | | | | | | Total Record Length | 30 | |
| **FLOW/LOAD CHECKS** | | | | | | | | |
| Reference Data for Flow-to-Load Ratio or Gross Heat Rate Evaluation (New) | 605 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Reference flow RATA end date | | YYYYMMDD | | 8 | I8 |
| | | 21 | Reference RATA end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 25 | Test number | | | | 2 | I2 |
| | | 27 | Average gross unit load (MWe or Steam) | | MWe, 1000 lb/hr steam | | 6 | I6 |
| | | 33 | Operating level (L-low, M-mid, H-high) (N-normal, for peaking units only) | | | L,M,H,N | 1 | A1 |
| | | 34 | Average reference method flow rate during reference flow RATA | | scfh | | 10 | I10 |
| | | 44 | Reference flow/load ratio | | | | 6 | F6.2 |
| | | 50 | Average hourly heat input rate during RATA | | mmBtu/hr | | 7 | F7.1 |
| | | 57 | Reference gross heat rate (GHR) value | | Btu/kw-hr, Btu/lb steam | | 6 | I6 |
| | | | | | | Total Record Length | 62 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **FLOW/LOAD CHECKS** | | | | | | | | |
| Quarterly Flow-to-Load Ratio or Gross Heat Rate Check (New) | 606 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Calendar quarter and year | | QYYYY | | 5 | I5 |
| | | 18 | Test basis indicator (Q-flow-to-load ratio; H-gross heat rate) | | | Q,H | 1 | A1 |
| | | 19 | Bias adjusted flow rates used (Y,N) | | | Y,N | 1 | A1 |
| | | 20 | Average absolute % difference between reference ratio (or GHR) and hourly ratios (or GHR values), $E_f$ | | % | 0.0-100.0 | 5 | F5.1 |
| | | 25 | Result (P-pass, F-fail, N-<168 hours within ± 10% of average load, E-<168 hours for data analysis after exempted hours removed) | | | P,F,N,E | 1 | A1 |
| | | 26 | Number of hours used in quarterly flow-to-load or GHR analysis | | hrs | | 4 | I4 |
| | | 30 | Number of hours excluded for different type of fuel | | hrs | | 4 | I4 |
| | | 34 | Number of hours excluded for load ramping up or down | | hrs | | 4 | I4 |
| | | 38 | Number of hours excluded for scrubber bypass | | hrs | | 4 | I4 |
| | | 42 | Number of excluded hours preceding a normal load flow RATA | | hrs | | 4 | I4 |
| | | 46 | Number of excluded hours preceding a successful diagnostic test, following a documented monitor repair, or following a major component replacement | | hrs | | 4 | I4 |
| | | 50 | Number of hours excluded for flue gases discharging simultaneously through a main stack and bypass stack | | hrs | | 4 | I4 |
| | | | | | | Total Record Length | 53 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **RATA/BIAS TESTS** | | | | | | | | |
| RATA and Bias Test Data (Modified) | 610 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Run start date | | YYMMDD | | 6 | I6 |
| | | 19 | Run start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Run end date | | YYMMDD | | 6 | I6 |
| | | 29 | Run end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 33 | Units of measure (1-ppm, 2-lb/mmBtu, 3-scfh, 4-%$CO_2$, 5-%$O_2$ 6-mmBtu/hr (OTC NBP only), 7-%$H_20$) | | | 1-7 | 1 | I1 |
| | | 34 | Value from CEM system being tested | | | | 13 | F13.3 |
| | | 47 | Value from reference method, adjusted as necessary for moisture and/or calibration bias | | | | 13 | F13.3 |
| | | 60 | Run number | | | | 2 | I2 |
| | | 62 | RATA run status flag<br>0 - RATA used, run not used<br>1 - run data used in calculating relative accuracy and bias<br>9 - test aborted | | | 0,1,9 | 1 | I1 |
| | | 63 | Operating level (L-low, M-mid, H-high) (Use N-normal for peaking units only) | | | L,M,H,N | 1 | A1 |
| | | 64 | Gross unit load | | MWe, 1000 lbs/hr | | 6 | I6 |
| | | 70 | Test number | | | | 2 | I2 |
| | | | | | | Total Record Length | 71 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **RATA/BIAS TESTS** | | | | | | | | |
| RATA and Bias Test Results (Modified) | 611 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | RATA end date | | YYMMDD | | 6 | I6 |
| | | 19 | RATA end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Reference method used [10] | | | | 11 | A11 |
| | | 34 | Units of measure (1-ppm, 2-lb/mmBtu, 3-scfh, 4-%$CO_2$,5-%$O_2$, 6-mmBtu/hr, 7-%$H_20$) | | | 1-7 | 1 | I1 |
| | | 35 | Arithmetic mean of CEMS values | | | | 13 | F13.3 |
| | | 48 | Arithmetic mean of reference method values | | | | 13 | F13.3 |
| | | 61 | Arithmetic mean of the difference data | | | | 13 | F13.3 |
| | | 74 | Standard deviation of difference data | | | | 13 | F13.3 |
| | | 87 | Confidence coefficient | | | | 13 | F13.3 |
| | | 100 | Relative accuracy | | | | 5 | F5.2 |
| | | 105 | Tabulated t- value (bias test) | | | | 6 | F6.3 |
| | | 111 | Bias adjustment factor at this load level | | | | 5 | F5.3 |
| | | 116 | Operating level (L-low, M-mid, H-high) (Use N-normal, for peaking units only) | | | L,M,H,N | 1 | A1 |
| | | 117 | Average gross unit load (MWe or steam) | | MWe, 1000 lbs/hr | | 6 | I6 |
| | | 123 | Reserved | | | | 4 | |
| | | 127 | Indication of normal load (N-normal, otherwise, blank) | | | N | 1 | A1 |
| | | 128 | Alternative performance specification (APS) flag [7] | | | 0,1 | 1 | I1 |
| | | 129 | Test number | | | | 2 | I2 |
| | | 131 | Reason for RATA (C-initial cert, D-diagnostic, R-recert, Q-QA, G-grace period QA) | | | C,D,R,Q, RQ,G,QD | 2 | A2 |
| | | 133 | Number of load levels comprising test (1 for gas RATAs, 1-3 for flow or heat input RATAs) | | | 1-3 | 1 | I1 |
| | | 134 | System bias adjustment factor for a multiple load flow RATA | | | | 5 | F5.3 |
| | | | | | Total Record Length | | 138 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **RATA/BIAS TESTS** | | | | | | | | |
| Reference Method Supporting Data for Flow RATA Tests (Methods 2, 2F, 2G, and 2H) Run Level Data (New) | 614 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Test number | | | | 2 | I2 |
| | | 15 | Operating level | | | H,M,L,N | 1 | A1 |
| | | 16 | Run number | | | | 2 | I2 |
| | | 18 | Run start date | | YYYYMMDD | | 8 | I8 |
| | | 26 | Run start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 30 | Run end date | | YYYYMMDD | | 8 | I8 |
| | | 38 | Run end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 42 | Flow rate reference method(s) used | | | 2F,2G, 2FH,2GH, M2H | 3 | A3 |
| | | 45 | Number of traverse points | | | | 2 | I2 |
| | | 47 | $P_{bar}$, barometric pressure, in. Hg | | in. Hg | | 5 | F5.2 |
| | | 52 | $P_g$, stack static pressure, in. $H_2O$ | | in. $H_2O$ | | 5 | F5.2 |
| | | 57 | % $CO_2$ in stack gas, dry basis | | % | | 5 | F5.1 |
| | | 62 | % $O_2$ in stack gas, dry basis | | % | | 5 | F5.1 |
| | | 67 | $CO_2$ and $O_2$ reference method | | | 3,3A | 4 | A4 |
| | | 71 | % moisture in stack gas | | $\%H_2O$ | | 5 | F5.1 |
| | | 76 | $M_d$, stack gas molecular weight, dry basis | | lbs/lbs-mole | | 5 | F5.2 |
| | | 81 | $M_s$, stack gas molecular weight, wet basis | | lbs/lbs-mole | | 5 | F5.2 |
| | | 86 | Stack diameter at test port location | | ft | | 5 | F5.2 |
| | | 91 | $A_s$, stack or duct cross-sectional area at test port | | $ft^2$ | | 6 | F6.1 |
| | | 97 | $v_S$, Average velocity for run, not accounting for wall effects | | ft/sec | | 6 | F6.2 |
| | | 103 | $v_S$, Average velocity for run, accounting for wall effects | | ft/sec | | 6 | F6.2 |
| | | 109 | Calculated wall effects adjustment factor (WAF) derived from this test run | | | | 6 | F6.4 |
| | | 115 | Calculated WAF applied to all runs of this RATA | | | ≥0.9700 | 6 | F6.4 |
| | | 121 | Default WAF applied to all runs of this RATA | | | 0.9900, 0.9950 | 6 | F6.4 |
| | | 127 | Average stack flow rate, wet basis, adjusted if applicable for wall effects | | scfh | | 10 | I10 |
| | | | | | Total Record Length | | 136 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **RATA/BIAS TESTS** | | | | | | | | |
| Reference Method Supporting Data for Flow RATA Tests (Methods 2, 2F, 2G, and 2H) Traverse Point Level Data (New) | 615 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Test number | | | | 2 | 12 |
| | | 15 | Operating level | | | L,M,H,N | 1 | A1 |
| | | 16 | Run number | | | | 2 | 12 |
| | | 18 | Reference method probe type | | | S,P,AS, DA, DAT,SPH | 4 | A4 |
| | | 22 | Probe ID | | | | 11 | A11 |
| | | 33 | Pressure measurement device type | | | MN,MG, ET | 2 | A2 |
| | | 35 | Method 1 traverse point ID | | | | 3 | A3 |
| | | 38 | Probe or pitot tube velocity calibration coefficient | | | | 5 | F5.3 |
| | | 43 | Date of latest probe or pitot tube calibration | | YYYYMMDD | | 8 | I8 |
| | | 51 | Average velocity differential pressure at traverse point | | in. $H_2O$ | | 5 | F5.3 |
| | | 56 | Average of square roots of velocity differential pressures at traverse point | | $(\text{in } H_2O)^{1/2}$ | | 5 | F5.3 |
| | | 61 | $T_s$, stack temperature at traverse point | | °F | | 5 | F5.1 |
| | | 66 | Exterior Method 1 traverse point identifier | | | W | 1 | A1 |
| | | 67 | Number of wall effects measurement points used to derive replacement velocity | | | | 2 | I2 |
| | | 69 | Yaw angle of flow at traverse point | | degrees | -179.9 to +180.0 | 6 | F6.1 |
| | | 75 | Pitch angle of flow at traverse point | | degrees | -179.9 to +180.0 | 6 | F6.1 |
| | | 81 | Calculated velocity at traverse point, not accounting for wall effects | | ft/sec | | 6 | F6.2 |
| | | 87 | Replacement velocity at traverse point, accounting for wall effects | | ft/sec | | 6 | F6.2 |
| | | | | | | Total Record Length | 92 | |
| Reference Method Supporting Data for Flow RATA Tests (Method 2 and 2H, default WAF only) (New) | 616 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Test number | | | | 2 | I2 |
| | | 15 | Operating level | | L,M,H,N | | 1 | A1 |
| | | 16 | RATA end date | | YYYYMMDD | | 8 | I8 |
| | | 24 | RATA end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 28 | Default wall effects adjustment factor used | | | 0.9900, 0.9950 | 6 | F6.4 |
| | | | | | | Total Record Length | 33 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **CYCLE TIME TEST** | | | | | | | | |
| Cycle Time Test Data and Results (Modified) | 621 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 26 | End time | | HHMM | 0000-2359 | 4 | I4 |
| | | 30 | Component cycle time | | min | | 2 | I2 |
| | | 32 | Stable starting monitor value | | | | 13 | F13.3 |
| | | 45 | Stable ending monitor value | | | | 13 | F13.3 |
| | | 58 | Calibration gas value | | | | 13 | F13.3 |
| | | 71 | Calibration gas level (Z-zero, H-high) | | | Z,H | 1 | A1 |
| | | 72 | Total or system cycle time [29] | | min | | 2 | I2 |
| | | 74 | Reason for test (C-initial cert, D-diagnostic, R-recert) | | | C,D,R | 2 | A2 |
| | | 76 | Test number | | | | 2 | I2 |
| | | | | | Total Record Length | | 77 | |
| **ON LINE/OFF LINE CALIBRATION DEMONSTRATION** | | | | | | | | |
| Qualifying Test for Off-line Calibration Error Tests (New) | 623 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Date | | YYMMDD | | 6 | I6 |
| | | 22 | Hour | | HH | 00-23 | 2 | I2 |
| | | 24 | Instrument span | | | | 13 | F13.3 |
| | | 37 | Reference value | | | | 13 | F13.3 |
| | | 50 | Measured value | | | | 13 | F13.3 |
| | | 63 | Results (CE or \|R-A\|) | | %,ppm | 0.00-100.0 | 5 | F5.1 |
| | | 68 | Alternative specification flag [7] | | | 0,1 | 1 | I1 |
| | | 69 | Reserved | | | | 2 | |
| | | 71 | Calibration gas or reference signal level (Z-zero, M-mid, H-high) | | | Z,M,H | 1 | A1 |
| | | 72 | Span scale (H-high, L-low) | | | H,L | 1 | A1 |
| | | 73 | Off-line/On-line indicator (OFF-unit not operating, ON-unit operating) | | | ON,OFF | 3 | A3 |
| | | 76 | Reason for test (C-initial demonstration, D-diagnostic) | | | C,D | 1 | A1 |
| | | 77 | Test number | | | | 2 | I2 |
| | | | | | Total Record Length | | 78 | |

[29] For $NO_x$ and $SO_2$ emission rate (lb/mmBtu) systems, report the longer cycle time of the two component analyzers as the system cycle time.

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **MISCELLANEOUS QA TEST/ACTIVITY** | | | | | | | | |
| Other QA Activities (New) | 624 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Parameter | | | | 4 | A4 |
| | | 20 | Activity/test completion date | | YYYYMMDD | | 8 | I8 |
| | | 28 | Activity/test completion hour | | HH | 00-23 | 2 | I2 |
| | | 30 | QA test activity description | | | | 20 | A20 |
| | | 50 | Test result (P-pass, F-fail) | | | P,F | 1 | A1 |
| | | 51 | Reason for test (C-initial cert, D-diagnostic, R-recert, Q-QA) | | | C,D,R,Q, RQ | 2 | A2 |
| | | 53 | QA test code | | | 01,02,03, 99 | 2 | I2 |
| | | | | | Total Record Length | | 54 | |
| **FUEL FLOWMETER ACCURACY CHECKS** | | | | | | | | |
| Fuel Flowmeter Accuracy Test (New) | 627 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Test completion date | | YYYYMMDD | | 8 | I8 |
| | | 24 | Test completion hour | | HH | | 2 | I2 |
| | | 26 | Reinstallation date (leave blank for in-line test) | | YYYYMMDD | | 8 | I8 |
| | | 34 | Reinstallation hour (leave blank for in-line test) | | HH | | 2 | I2 |
| | | 36 | Accuracy at low fuel flowrate (% of URV) | | % | | 5 | F5.1 |
| | | 41 | Highest accuracy at mid fuel flowrate (% of URV) | | % | | 5 | F5.1 |
| | | 46 | Accuracy at high fuel flowrate (% of URV) | | % | | 5 | F5.1 |
| | | 51 | Test method (L-lab comparison to reference meter, I-in-line comparison to master meter) | | | I,L | 1 | A1 |
| | | 52 | Test result (A-aborted, P-pass, F-fail) | | | A,P,F | 1 | A1 |
| | | 53 | Test number | | | | 2 | I2 |
| | | | | | Total Record Length | | 54 | |
| Accuracy Test for Orifice, Nozzle, or Venturi Type Fuel Flowmeters (New) | 628 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Test completion date | | YYYYMMDD | | 8 | I8 |
| | | 24 | Test completion hour | | HH | | 2 | I2 |
| | | 26 | Accuracy determination at low level [30] | | % | | 5 | F5.1 |
| | | 31 | Accuracy determination methodology for low level [10] | | | | 4 | A4 |
| | | 35 | Highest accuracy determination at mid level [30] | | % | | 5 | F5.1 |
| | | 40 | Accuracy determination methodology for mid level [10] | | | | 4 | A4 |
| | | 44 | Accuracy determination at high level [30] | | % | | 5 | F5.1 |
| | | 49 | Accuracy determination methodology for high level [10] | | | | 4 | A4 |
| | | 53 | Test result (A-aborted, P-pass, F-fail) | | | A,P,F | 1 | A1 |
| | | 54 | Test number | | | | 2 | I2 |
| | | | | | Total Record Length | | 55 | |

[30] Report either: (1) the highest individual accuracy of any of the three transmitters; or (2) the sum of the three transmitter accuracies; or (3) the total fuel flowmeter accuracy calculated according to AGA3 part 1, "General Equations and Uncertainty Guidelines."

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **QUARTERLY FUEL FLOW-TO-LOAD ANALYSIS** | | | | | | | | |
| Baseline Data for Fuel-Flow-to-Load Ratio or Gross Heat Rate Check for Fuel Flowmeters (New) | 629 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Completion date of most recent primary element inspection | | YYYYMMDD | | 8 | I8 |
| | | 21 | Completion hour of most recent primary element inspection | | HH | | 2 | I2 |
| | | 23 | Completion date of most recent flowmeter or transmitter accuracy test | | YYYYMMDD | | 8 | I8 |
| | | 31 | Completion hour of most recent flowmeter or transmitter accuracy test | | HH | | 2 | I2 |
| | | 33 | Beginning date of baseline period | | YYYYMMDD | | 8 | I8 |
| | | 41 | Beginning hour of baseline period | | HH | | 2 | I2 |
| | | 43 | Completion date of baseline period | | YYYYMMDD | | 8 | I8 |
| | | 51 | Completion hour of baseline period | | HH | | 2 | I2 |
| | | 53 | Average fuel flow rate (100 scfh for gas and lb/hr for oil) | | | | 10 | F10.1 |
| | | 63 | Average load (MWe or 1000 lb/stream/hr) | | | | 6 | I6 |
| | | 69 | Baseline fuel-flow-to-load ratio | | | | 6 | F6.2 |
| | | 75 | Units of fuel-flow-to-load (1-100scfh/MWe, 2-100scfh/klb per hour steam, 3-(lb/hr)/MWe, 4-(lb/hr)/klb per hour steam load) | | | 1-4 | 1 | I1 |
| | | 76 | Average hourly heat input rate | | mmBtu/hr | | 7 | F7.1 |
| | | 83 | Baseline GHR | | | | 6 | I6 |
| | | 89 | Units of baseline GHR (1 - Btu/kwh, 2 - Btu/lb steam) | | | 1-2 | 1 | I1 |
| | | 90 | Number of hours excluded due to co-firing | | hrs | | 3 | I3 |
| | | 93 | Number of hours excluded due to ramping | | hrs | | 3 | I3 |
| | | 96 | Number of excluded hours in lower 25% of range of operation | | hrs | | 3 | I3 |
| | | 99 | Flag indicating baseline data collection is in progress and that < 4 calendar quarters have elapsed since quarter of the last flowmeter QA test | | | B | 1 | A1 |
| | | | | | | Total Record Length | 99 | |
| Quarterly Fuel-Flow-to-Load Test for Fuel Flowmeters (New) | 630 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Component ID | | | | 3 | A3 |
| | | 16 | Calendar quarter and year | | QYYYY | | 5 | I5 |
| | | 21 | Test basis indicator (Q-flow-to-load ratio, H-gross heat rate) | | | Q,H | 1 | A1 |
| | | 22 | Quarterly average absolute % difference between baseline ratio (or baseline GHR) and hourly quarterly ratios (or GHR values), $E_f$ | | % | 0.0-100.0 | 5 | F5.1 |
| | | 27 | Result (P-pass, F-fail, N-<168 hours data, E-<168 hours of data after exemptions removed, B-baseline data collection in progress) | | | P,F,N,E,B | 1 | A1 |
| | | 28 | Number of hours used in the quarterly data analysis | | hrs | | 4 | I4 |
| | | 32 | Number of hours excluded due to co-firing | | hrs | | 4 | I4 |
| | | 36 | Number of hours excluded due to ramping | | hrs | | 4 | I4 |
| | | 40 | Number of excluded hours in lower 25% of range of operation | | hrs | | 4 | I4 |
| | | | | | | Total Record Length | 43 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **ALTERNATIVE MONITORING PETITION DATA** | | | | | | | | |
| Alternative Monitoring System Approval Petition Data<br><br>(Renumbered from EDR v1.3 RT 630) | 640 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | AMS ID | | | | 6 | A6 |
| | | 22 | Date | | YYMMDD | | 6 | I6 |
| | | 28 | Hour | | HH | 00-23 | 2 | I2 |
| | | 30 | Hourly test data for alternative monitoring system | | | | 13 | F13.3 |
| | | 43 | Hourly lognormalized test data for alternative monitoring system | | | | 13 | F13.3 |
| | | 56 | Hourly test data for reference CEMS | | | | 13 | F13.3 |
| | | 69 | Fuel type code | | | | 2 | I2 |
| | | 71 | Operating level (L-low, M-mid, H-high) (Use N-normal for peaking units only) | | | L,M,H,N | 1 | A1 |
| | | 72 | Gross unit load | | MWe | | 6 | I6 |
| | | | | | | Total Record Length | 77 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **ALTERNATIVE MONITORING PETITION DATA** | | | | | | | | |
| Alternative Monitoring System Approval Petition Results and Statistics (Renumbered from EDR v1.3 RT 631) | 641 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Unit of measure (1-ppm, 2-lb/mmBtu, 3-scfh, 4-%$CO_2$, 5-%$O_2$, 6-mmBtu/hr, 7-%$H_2O$) | | | 1-7 | 1 | A1 |
| | | 17 | Arithmetic mean of AMS values | | | | 13 | F13.3 |
| | | 30 | Arithmetic mean of CEM values | | | | 13 | F13.3 |
| | | 43 | Arithmetic mean of differences of paired AMS and CEM values | | | | 13 | F13.3 |
| | | 56 | Variance of differences | | | | 13 | F13.3 |
| | | 69 | Variance of measured values of AMS | | | | 13 | F13.3 |
| | | 82 | Variance of measured values for CEM | | | | 13 | F13.3 |
| | | 95 | F-statistic | | | | 13 | F13.3 |
| | | 108 | Critical value of F at 95% confidence level for sample size | | | | 13 | F13.3 |
| | | 121 | Coefficient of correlation (Pearson's r) of CEM and AMS data | | | | 13 | F13.3 |
| | | 134 | Shapiro-Wilk test statistic (W) for AMS data | | | | 13 | F13.3 |
| | | 147 | Shapiro-Wilk test statistic (W) for CEMS data | | | | 13 | F13.3 |
| | | 160 | Lognormally adjusted data used in final analysis (1-yes, 0-no) | | | 0,1 | 1 | I1 |
| | | 161 | Autocorrelation coefficient (ρ) for AMS data | | | | 13 | F13.3 |
| | | 174 | Autocorrelation coefficient (ρ) for CEM data | | | | 13 | F13.3 |
| | | 187 | Autocorrelation coefficient (ρ) for differences of paired AMS and CEM data | | | | 13 | F13.3 |
| | | 200 | Adjustment for autocorrelation used in final analysis (1-yes, 0-no) | | | 0,1 | 1 | I1 |
| | | 201 | Covariance of alternative monitoring data and associated lag(1) values | | | | 13 | F13.3 |
| | | 214 | Covariance of continuous emission monitoring data and associated lag(1) values | | | | 13 | F13.3 |
| | | 227 | Covariance of differences of paired AMS and CEM data | | | | 13 | F13.3 |
| | | 240 | Standard deviation of AMS data | | | | 13 | F13.3 |
| | | 253 | Standard deviation of CEM data | | | | 13 | F13.3 |
| | | 266 | Standard deviation of differences of paired AMS and CEM data | | | | 13 | F13.3 |
| | | 279 | Standard deviation of lag(1) AMS data | | | | 13 | F13.3 |
| | | 292 | Standard deviation of lag(1) CEM data | | | | 13 | F13.3 |
| | | 305 | Standard deviation of lag(1) differences of paired AMS and CEM data | | | | 13 | F13.3 |
| | | 318 | Variance inflation factor for AMS data | | | | 13 | F13.3 |
| | | 331 | Variance inflation factor for CEM data | | | | 13 | F13.3 |
| | | 344 | Variance inflation factor for difference of paired AMS and CEM data | | | | 13 | F13.3 |
| | | | | | | Total Record Length | 356 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **LOW MASS EMISSIONS CERTIFICATION DATA** | | | | | | | | |
| Qualifying Data for Low Mass Emissions Units Excepted Methodology (New) | 645 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit ID | | | | 6 | A6 |
| | | 10 | Calendar year of application | | YYYY | | 4 | I4 |
| | | 14 | Type of qualification | | | YR,OS | 2 | A2 |
| | | 16 | Year 1 | | YYYY | | 4 | I4 |
| | | 20 | Annual or OS measured/projected $NO_x$ mass emissions for Year 1 | | ton | | 4 | F4.1 |
| | | 24 | Annual or OS $NO_x$ mass calculated from emission factors for Year 1 | | ton | | 4 | F4.1 |
| | | 28 | Annual measured/projected $SO_2$ mass emissions for Year 1 | ARP only | ton | | 4 | F4.1 |
| | | 32 | Annual $SO_2$ mass calculated from emission factors for Year 1 | ARP only | ton | | 4 | F4.1 |
| | | 36 | Annual or OS operating hours for Year 1 | | hrs | | 4 | I4 |
| | | 40 | Year 2 | | YYYY | | 4 | I4 |
| | | 44 | Annual or OS measured/projected $NO_x$ mass emissions for Year 2 | | ton | | 4 | F4.1 |
| | | 48 | Annual or OS $NO_x$ mass calculated from emission factors for Year 2 | | ton | | 4 | F4.1 |
| | | 52 | Measured/projected $SO_2$ mass emissions for Year 2 | ARP only | ton | | 4 | F4.1 |
| | | 56 | Annual $SO_2$ mass calculated from emission factors for Year 2 | ARP only | ton | | 4 | F4.1 |
| | | 60 | Annual or OS operating hours for Year 2 | | hrs | | 4 | I4 |
| | | 64 | Year 3 | | YYYY | | 4 | I4 |
| | | 68 | Annual or OS measured/projected $NO_x$ mass emissions for Year 3 | | ton | | 4 | F4.1 |
| | | 72 | Annual or OS $NO_x$ mass calculated from emission factors for Year 3 | | ton | | 4 | F4.1 |
| | | 76 | Measured/projected $SO_2$ mass emissions for Year 3 | ARP only | ton | | 4 | F4.1 |
| | | 80 | Annual $SO_2$ mass calculated from emission factors for Year 3 | ARP only | ton | | 4 | F4.1 |
| | | 84 | Annual or OS operating hours for Year 3 | | hrs | | 4 | I4 |
| | | | | | Total Record Length | | 87 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **APPENDIX E AND UNIT SPECIFIC DEFAULT EMISSION RATE TEST DATA** | | | | | | | | |
| $NO_x$ Emission Rate Correlation Test Data (Modified) | 650 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID for Appendix E $NO_x$ system | Appendix E only | | | 3 | A3 |
| | | 13 | Reference method run start date | | YYMMDD | | 6 | I6 |
| | | 19 | Reference method run start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Reference method run end date | | YYMMDD | | 6 | I6 |
| | | 29 | Reference method run end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 33 | Reference method response time | | sec | 0-800 | 3 | I3 |
| | | 36 | Value from reference method during run | | lb/mmBtu | | 8 | F8.3 |
| | | 44 | Run number | | | | 2 | I2 |
| | | 46 | Operating level (1-lowest) | | | 1-99 | 2 | I2 |
| | | 48 | Type of fuel combusted [10] | | | | 1 | A1 |
| | | 49 | Total heat input during the run | | mmBtu | | 7 | F7.1 |
| | | 56 | Reserved | | | | 3 | |
| | | 59 | Hourly heat input rate during run | | mmBtu/hr | | 7 | F7.1 |
| | | 66 | Test number | | | | 2 | I2 |
| | | 68 | Flag to indicate highest $NO_x$ emission rate for unit-specific, fuel-specific $NO_x$ emission rate testing (H-highest value) | | | H | 1 | A1 |
| | | 69 | Adjusted $NO_x$ default rate | LME unit default testing only | lb/mmBtu | | 6 | F6.3 |
| | | | | | | Total Record Length | 74 | |
| $NO_x$ Emission Rate Correlation Results (Modified) | 651 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID for Appendix E $NO_x$ system | | | | 3 | A3 |
| | | 13 | Completion date of last run in level | | YYMMDD | | 6 | I6 |
| | | 19 | Completion time of last run in level | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Arithmetic mean of reference method values at this level | | lb/mmBtu | | 8 | F8.3 |
| | | 31 | F-factor converting $NO_x$ concentrations to emission rates | | | | 10 | F10.1 |
| | | 41 | Average heat input rate at this level | | mmBtu/hr | | 7 | F7.1 |
| | | 48 | Operating level (1-lowest) | | | 1-99 | 2 | I2 |
| | | 50 | Type of fuel combusted [10] | | | | 1 | A1 |
| | | 51 | Test number | | | | 2 | I2 |
| | | | | | | Total Record Length | 52 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **APPENDIX E AND UNIT SPECIFIC DEFAULT EMISSION RATE TEST DATA** | | | | | | | | |
| Heat Input from Oil Combusted During Test<br><br>(Modified) | 652 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID for oil fuel flow system | | | | 3 | A3 |
| | | 13 | Run start date | | YYMMDD | | 6 | I6 |
| | | 19 | Run start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Run end date | | YYMMDD | | 6 | I6 |
| | | 29 | Run end time | | HHMM | | 4 | I4 |
| | | 33 | Run number | | | | 2 | I2 |
| | | 35 | Mass of oil combusted during run | | lb | | 10 | F10.1 |
| | | 45 | Gross calorific value (GCV) of oil | | | | 10 | F10.1 |
| | | 55 | Heat input from oil during run | | mmBtu | | 7 | F7.1 |
| | | 62 | Volume of oil combusted during run | | | | 10 | F10.1 |
| | | 72 | Units of measure for oil flow [10] | | | | 5 | A5 |
| | | 77 | Density of oil | | | | 8 | F8.6 |
| | | 85 | Units of measure for density of oil [10] | | | | 5 | A5 |
| | | 90 | Test number | | | | 2 | I2 |
| | | 92 | Units of measure for GCV [10] | | | | 6 | A6 |
| | | | | | | Total Record Length | 97 | |
| Heat Input from Gas Combusted During Test<br><br>(Modified) | 653 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID for gas fuel flow system | | | | 3 | A3 |
| | | 13 | Run start date | | YYMMDD | | 6 | I6 |
| | | 19 | Run start time | | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Run end date | | YYMMDD | | 6 | I6 |
| | | 29 | Run end time | | HHMM | 0000-2359 | 4 | I4 |
| | | 33 | Volume of gas combusted during run | | 100 scf | | 10 | F10.1 |
| | | 43 | Gross calorific value (GCV) of gas | | Btu/100 scf | | 10 | F10.1 |
| | | 53 | Heat input from gas during run | | mmBtu | | 7 | F7.1 |
| | | 60 | Test number | | | | 2 | I2 |
| | | | | | | Total Record Length | 61 | |
| Unit Group Testing<br><br>(New)<br><br>**LME and OTC Only** | 660 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Group ID | | | | 8 | A8 |
| | | 12 | ORIS code or facility ID | | | | 6 | I6 |
| | | 18 | Plant name | | | | 20 | A20 |
| | | 38 | Unit ID | | | | 6 | A6 |
| | | 44 | Test status (AE-App. E testing performed, OT-other testing performed (NBP only), NT-no testing performed) | | | AE,OT, NT | 2 | A2 |
| | | 46 | Test date for unit (blank, if not tested) | | YYYYMMDD | | 8 | I8 |
| | | 54 | Default rate from identical unit testing (if applicable) | | lb/mmBtu | | 6 | F6.3 |
| | | 60 | Purpose of group tests (AE-Appendix E, DF-default rate) | | | AE,DF | 2 | A2 |
| | | 62 | Type of fuel [10] | | | | 1 | A1 |
| | | 63 | $NO_x$ monitoring system ID | OTC Appendix E only | | | 3 | A3 |
| | | | | | | Total Record Length | 65 | |

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **QA TEST EXTENSIONS/EXEMPTION CLAIMS** | | | | | | | | |
| Single-load Flow RATA Claim (New) | 695 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | End date of last annual flow RATA | | YYYYMMDD | | 8 | I8 |
| | | 21 | End date of historical load data collection period | | YYYYMMDD | | 8 | I8 |
| | | 29 | Historical % usage of low load level (≤ 30.0% of range of operation) in the load data collection period | | % | 0-100.0 | 5 | F5.1 |
| | | 34 | Historical % usage of mid load level (>30.0 through 60.0% of range of operation) in the load data collection period | | % | 0-100.0 | 5 | F5.1 |
| | | 39 | Historical % usage of high load level (>60.0% of range of operation) in the load data collection period | | % | 0-100.0 | 5 | F5.1 |
| | | 44 | Load level for the single-load flow RATA | | | L,M,H | 1 | A1 |
| | | | | | | Total Record Length | 44 | |
| Fuel Flowmeter Accuracy Test Extension (New) | 696 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date of last accuracy test | | YYYYMMDD | | 8 | I8 |
| | | 21 | Accuracy test expiration date without extension | | YYYYMMDD | | 8 | I8 |
| | | 29 | Accuracy test expiration date with extension | | YYYYMMDD | | 8 | I8 |
| | | 37 | Type of extension [31] | | | 1-4 | 2 | I2 |
| | | 39 | Quarter and year | | QYYYY | | 5 | A5 |
| | | | | | | Total Record Length | 43 | |
| RATA Deadline Extension or Exemption (New) | 697 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | | 3 | A3 |
| | | 13 | Date of last RATA | | YYYYMMDD | | 8 | I8 |
| | | 21 | RATA expiration date without extension | | YYYYMMDD | | 8 | I8 |
| | | 29 | RATA expiration date with extension | | YYYYMMDD | | 8 | I8 |
| | | 37 | Type of RATA extension or exemption claimed or lost [32] | | | 1-8 | 2 | I2 |
| | | 39 | Year-to-date usage of fuel with sulfur content higher than very low sulfur fuel (as defined in § 72.2) | | hrs | | 4 | I4 |
| | | 43 | Year-to-date hours of regular non-redundant back-up CEMS use at this unit/stack | | hrs | | 4 | I4 |
| | | 47 | Quarter and year | | QYYYY | | 5 | A5 |
| | | | | | | Total Record Length | 51 | |

[31] Limited to table of codes:
1 Accuracy test extension (reporting quarter does not qualify as a "fuel flowmeter QA operating quarter")
2 Accuracy test extension based on successful fuel flow-to-load ratio or GHR test
3 Accuracy test extension based on ongoing baseline data collection for fuel-to-load ratio or GHR test
4 Extension claimed because fewer than 168 hours of fuel flowmeter data remained for fuel flow-to-load ratio analysis, after allowable data exclusions were taken under Section 2.1.7.3 of Appendix D

[32] Limited to table of codes:
1 RATA deadline extension claimed for the monitoring system identified in RT 697/10. Unit/stack operated for fewer than 168 hours this quarter
2 $SO_2$ RATA deadline extension claimed. Only very low sulfur fuel (as defined in § 72.2) was combusted this quarter
3 Ongoing $SO_2$ RATA exemption claimed. Only very low sulfur fuel (as defined in § 72.2) was combusted this quarter
4 Conditional $SO_2$ RATA exemption claimed. Year-to-date usage of fuel with a higher sulfur content than 'very low sulfur' fuel (as defined in § 72.2) is ≤ 480 hours.
5 Conditional RATA exemption claimed. Year-to-date usage of a regular (B) non-redundant backup monitoring system at this unit/stack is < 720 hours and less than 8 full quarters have elapsed since last RATA
6 Ongoing $SO_2$ RATA exemption lost. Fuel with a higher sulfur content than very low sulfur fuel (as defined in § 72.2) was combusted this quarter
7 Conditional $SO_2$ RATA exemption lost. Year-to-date usage of fuel with a higher sulfur content than very low sulfur fuel (as defined in § 72.2) has exceeded 480 hours
8 Conditional RATA exemption lost. Year-to-date usage of a regular non-redundant backup monitoring system has exceeded 720 hours at this unit or stack

# TABLE 6: CERTIFICATION TEST DATA AND RESULTS

| CERTIFICATION TEST DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **FIELD NOTES** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **QA TEST EXTENSIONS/EXEMPTION CLAIMS** | | | | | | | | |
| Quarterly QA Test Exemption Claim (New) | 698 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Basis for exemption [33] | | | 1-9 | 1 | I1 |
| | | 17 | Type of test | | | F,K,L | 1 | A1 |
| | | 18 | Quarter and year | | QYYYY | | 5 | I5 |
| | | 23 | Span scale | | | L,H | 1 | A1 |
| | | | | | Total Record Length | | 23 | |
| QA Test Extension Claim Based on Grace Period (New) | 699 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | | 6 | A6 |
| | | 10 | Component ID | | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | | 3 | A3 |
| | | 16 | Type of test (K-Leak Test, L-linearity, R-RATA) | | | K,L,R | 1 | A1 |
| | | 17 | Beginning of grace period | | YYYYMMDD | | 8 | I8 |
| | | 25 | Date of completion of required QA test | | YYYYMMDD | | 8 | I8 |
| | | 33 | Hour of completion of required QA test | | HH | 00-23 | 2 | I2 |
| | | 35 | Number of unit/stack operating hours from beginning of grace period to completion of QA test or maximum allowable grace period | | hrs | | 3 | I3 |
| | | 38 | Date of end of grace period | | YYYYMMDD | | 8 | I8 |
| | | 46 | Hour of end of grace period | | HH | 00-23 | 2 | I2 |
| | | | | | Total Record Length | | 47 | |

[33]
1 Exemption for fewer than 168 unit/stack operating hours in quarter or reporting period
2 Linearity exemption analyzer range not used during calendar quarter (dual span only)
3 Flow-to-load test exemptions approved by petition under §75.66 and Section 7.8 of Appendix A
4 Linearity exemption for $SO_2$ or $NO_x$ analyzer span value ≤ 30 ppm

# TABLE 7: COMPLIANCE CERTIFICATION DATA

| CERTIFICATION INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **PROGRAM** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| **CERTIFICATION DATA** | | | | | | | | |
| Part 75 Certification Statement and Designated Representative Signature<br>**ARP Only** | 900 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Electronic representation of Part 75 certification statements [34] | | | | 18 | A18 |
| | | 22 | DR last name | | | | 25 | A25 |
| | | 47 | DR first name | | | | 15 | A15 |
| | | 62 | DR middle initial | | | | 2 | A2 |
| | | 64 | Date of signature | | | YYMMDD | 6 | I6 |
| | | 70 | Title (DR or ADR) | | | DR,ADR | 3 | A3 |
| | | | | | | Total Record Length | 72 | |
| Part 72 Certification Statement<br>**ARP Only** | 901 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Certification statement line # | | | 1-12 | 2 | I2 |
| | | 6 | Certification text (see instructions for verbatim text) | | | | 67 | A67 |
| | | | | | | Total Record Length | 72 | |
| Cover Letter Text (file-specific)<br>(Optional) | 910 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Cover letter text, file-specific (see instructions) | | | | 69 | A69 |
| | | | | | | Total Record Length | 72 | |
| Cover Letter Text (not specific to file)<br>(Optional) | 920 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Other cover letter text, not file-specific (see instructions) | | | | 69 | A69 |
| | | | | | | Total Record Length | 72 | |

[34] The code for this data element is either "CERTIFY," "CERTIFY CONTROLLED," or "CERTIFY DEFERRED."

"CERTIFY" means:

"I understand that EPA may reject any electronic data submission (including Quarterly Reports) if it does not conform to the formatting requirements of EPA's Electronic Data Reporting, Version 2.1, as required by 40 CFR 75.64.

I certify that all data submitted in this report were recorded in accordance with the applicable requirements of 40 CFR Part 75, and that all emissions and quality control data are reported using component ID codes, system ID codes, and formula ID codes which represent current operating conditions."

"CERTIFY CONTROLLED" means:

"I certify that for all hours in which data are submitted following the provisions of 75.34(a)(a) that the add-on emission controls were operating within the range of parameters listed in the monitoring plan and that the substitute values recorded during the quarter do not systematically underestimate $SO_2$ or other emissions, pursuant to § 75.34.

I understand that EPA may reject any electronic data submission (including Quarterly Reports) if it does not conform to the formatting requirements of EPA's Electronic Data Reporting, Version 2.1, as required by 40 CFR 75.64.

I certify that all data submitted in this report were recorded in accordance with the applicable requirements of 40 CFR Part 75, and that all emissions and quality control data are reported using component ID codes, system ID codes, and formula ID codes which represent current operating conditions."

"CERTIFY DEFERRED" means:

"I understand that for non-operating, affected unit(s) that are not yet certified under 40 CFR 75.4, this electronic report does not have to be generated by a Data Acquisition and Handling System.

I certify that one or more of the affected units identified in this electronic report did not operate and did not generate any $SO_2$, $NO_x$, or $CO_2$ emissions during the reporting period specified in the quarterly submission."

# TABLE 7: COMPLIANCE CERTIFICATION DATA

| CERTIFICATION INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **RECORD TYPE** | **TYPE CODE** | **START COL** | **DATA ELEMENT DESCRIPTION** | **PROGRAM** | **UNITS** | **RANGE** | **LENGTH** | **FORMAT (FTN)** |
| Subpart H Certification Statement and $NO_x$ Authorized Account Representative Signature<br><br>(New)<br><br>**Subpart H Only** | 940 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Electronic representation of $NO_x$ Budget Program certification statements [35] | | | | 18 | A18 |
| | | 22 | AAR last name | | | | 25 | A25 |
| | | 47 | AAR first name | | | | 15 | A15 |
| | | 62 | AAR middle initial | | | | 2 | A2 |
| | | 64 | Date of signature | | | | 6 | I6 |
| | | 70 | Title (AAR or AAAR) | | | | 4 | A4 |
| | | | | Total Record Length | | | 73 | |
| Subpart H General Certification Statement<br><br>(New)<br><br>**Subpart H Only** | 941 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | Certification statement line # | | | 1-11 | 2 | I2 |
| | | 6 | Certification text (ask State for verbatim text) | | | | 67 | A67 |
| | | | | Total Record Length | | | 72 | |
| Contact Person Record<br><br>(Optional)<br><br>(New) | 999 | 1 | Record type code | | | | 3 | I3 |
| | | 4 | First name | | | | 10 | A10 |
| | | 14 | Last name | | | | 15 | A15 |
| | | 29 | Role/Position of contact person | | | | 20 | A20 |
| | | 49 | Company | | | | 20 | A20 |
| | | 69 | DR indicator flag (D-DR/ADR/AAR/AAAR, N-Other) | | | D,N | 1 | A1 |
| | | 70 | Phone # | | | | 10 | I10 |
| | | 80 | Fax # | | | | 10 | I10 |
| | | 90 | E-mail address | | | | 75 | A75 |
| | | | | Total Record Length | | | 164 | |

[35] The code for this data element is either "CERTIFY," "CERTIFY CONTROLLED," or "CERTIFY DEFERRED."

Unless otherwise specified by State requirements, "CERTIFY" means:

"I understand that the State or EPA may reject any electronic data submission (including Quarterly Reports) if it does not conform to the formatting requirements of EPA's Electronic Data Reporting, Version 2.1.

I certify that all data submitted in this report were recorded in accordance with Part 75 and any applicable State requirements and that all emissions and quality control data are reported using component ID codes, system ID codes, and formula ID codes which represent current operating conditions."

Unless otherwise specified by State requirements, "CERTIFY CONTROLLED" means:

"I certify that for all hours in which data are substituted that the add-on emission controls were operating within the range of parameters listed in the monitoring plan and that the substitute values recorded during the quarter do not systematically underestimate emissions.

I understand that the State or EPA may reject any electronic data submission (including Quarterly Reports) if it does not conform to the formatting requirements of EPA's Electronic Data Reporting, Version 2.1.

I certify that all data submitted in this report were recorded in accordance with Part 75 and any applicable State requirements and that all emissions and quality control data are reported using component ID codes, system ID codes, and formula ID codes which represent current operating conditions."

Unless otherwise specified by State requirements, "CERTIFY DEFERRED" means:

"I understand that for non-operating, affected unit(s) that are not yet certified under Part 75 and applicable State regulations, this electronic report does not have to be generated by a Data Acquisition and Handling System.

I certify that one or more of the affected units identified in this electronic report did not operate and did not generate any $NO_X$ emissions during the reporting period specified in the submission."

# APPENDIX A: OTC NBP ONLY RECORD TYPES (FROM EDR v2.0)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Daily QA Reference Checks for Non-CEMS Parameters | 232 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | System parameter | | | 4 | A4 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 26 | Hour | HH | 00-23 | 2 | I2 |
| | | 28 | Reference value | | | 13 | F13.3 |
| | | 41 | Measured value | | | 13 | F13.3 |
| | | 54 | Units of measure | | | 5 | A5 |
| | | 59 | Level (L-low, M-mid, N-normal, H-high) | | L,M,N,H | 1 | A1 |
| | | 60 | Results (CE) | % | 0.0-100.0 | 5 | F5.1 |
| | | 65 | Status (P-pass, F-fail) | | P,F | 1 | A1 |
| | | | | | Total Record Length | 65 | |
| Other Daily QA Checks | 233 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Hour | HH | 00-23 | 2 | I2 |
| | | 24 | Status (P-pass, F-fail) | | P,F | 1 | A1 |
| | | | | | Total Record Length | 24 | |
| Long Term Fuel Flow Measurements | 306 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Type of fuel | | | 3 | A3 |
| | | 16 | Period begin date | YYYYMMDD | | 8 | I8 |
| | | 24 | Period begin hour | HH | 00-23 | 2 | I2 |
| | | 26 | Period end date | YYYYMMDD | | 8 | I8 |
| | | 34 | Period end hour | HH | 00-23 | 2 | I2 |
| | | 36 | Quantity of fuel | | | 10 | I10 |
| | | 46 | Units of measure | | | 5 | A5 |
| | | 51 | Operating hours in period | hr | | 4 | I4 |
| | | 55 | Measurement method code | | | 3 | A3 |
| | | | | | Total Record Length | 57 | |
| Hourly Heat Input Data for Alternative Heat Input Methods | 350 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Hour | HH | 00-23 | 2 | I2 |
| | | 24 | Percent availability for heat input calculations | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | Hourly heat input rate | mmBtu/hr | | 7 | F7.1 |
| | | 36 | Adjusted hourly heat input rate | mmBtu/hr | | 7 | F7.1 |
| | | 43 | Method of determination code | | 05-12,30, 54,55 | 2 | I2 |
| | | | | | Total Record Length | 44 | |

## APPENDIX A: OTC NBP ONLY RECORD TYPES (FROM EDR v2.0) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Supplementary Heat Input Data for Solid Fuel Measurements | 351 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Date | YYMMDD | | 6 | I6 |
| | | 19 | Hour | HH | 00-23 | 2 | I2 |
| | | 21 | Gross calorific value (GCV) | Btu/lb | | 10 | F10.1 |
| | | 31 | Mass of fuel burned during the hour | lb | | 10 | F10.1 |
| | | 41 | Hourly fuel feed rate | lb/hr | | 10 | F10.1 |
| | | 51 | Fuel usage time | | 0.01-1.00 | 4 | F4.2 |
| | | | | | Total Record Length | 54 | |
| Supplementary Heat Input Data for Other Methodologies | 352 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Hour | HH | 00-23 | 2 | I2 |
| | | 24 | Parameter (use code approved by State) | | | 4 | A4 |
| | | 28 | Operator (LT-less than, GT-greater than, LE-less than or equal to, GE-greater than or equal to, EQ-equal to) | | LT,GT,LE, GE,EQ | 3 | A3 |
| | | 31 | Limit | | | 13 | F13.3 |
| | | 44 | Units (use code approved by State) | | | 5 | A5 |
| | | 49 | Hourly value | | | 13 | F13.3 |
| | | 62 | Parameter status flag (Y-in spec, N-out of spec, X-parameter data missing or invalid) | | Y,N,X | 1 | A1 |
| | | | | | Total Record Length | 62 | |
| Monitoring System Recertification Events | 555 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Monitoring system ID/Component ID | | | 3 | A3 |
| | | 13 | Begin date of recertification event | YYMMDD | | 6 | I6 |
| | | 19 | Begin hour of recertification event | HH | 00-23 | 2 | I2 |
| | | 21 | Recertification event code | | | 2 | I2 |
| | | 23 | Recertification event description | | | 50 | A50 |
| | | 73 | Recertification event response/action taken | | | 50 | A50 |
| | | 123 | Reserved | | | 3 | A3 |
| | | 126 | 7-day calibration test required | 7CE | | 3 | A3 |
| | | 129 | Linearity check required | LIN | | 3 | A3 |
| | | 132 | Cycle time test required | CTT | | 3 | A3 |
| | | 135 | RATA/bias test required (RAN: normal load only, RA3: 3-load RATA) | RAN,RA3 | | 3 | A3 |
| | | 138 | DAHS verification required | VER | | 3 | A3 |
| | | 141 | Daily calibration | DLC | | 3 | A3 |
| | | 144 | Interference check | INT | | 3 | A3 |
| | | 147 | Leak check | LCK | | 3 | A3 |
| | | 150 | Completion date of required recertification tests | YYMMDD | | 6 | I6 |
| | | 156 | Completion hour of required recertification tests | HH | 00-23 | 2 | I2 |
| | | | | | Total Record Length | 157 | |

## APPENDIX A: OTC NBP ONLY RECORD TYPES (FROM EDR v2.0) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Fuel Flowmeter Calibration Data | 625 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Test number | | | 2 | I2 |
| | | 24 | Reference flow measurement value | | | 10 | F10.1 |
| | | 34 | Measured flow value | | | 10 | F10.1 |
| | | 44 | Units of measure for URV and flow rate | | | 5 | A5 |
| | | 49 | Fuel flow rate level (L-low, M-mid, H-high) | L,M,H | | 1 | A1 |
| | | | | | Total Record Length | 49 | |
| Fuel Flowmeter Calibration Results | 626 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Pipe ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Test number | | | 2 | I2 |
| | | 24 | Component upper range value | | | 10 | F10.1 |
| | | 34 | Mean of reference flow values | | | 10 | F10.1 |
| | | 44 | Mean of measured flow values | | | 10 | F10.1 |
| | | 54 | Units of measure for URV and flow rate | | | 5 | A5 |
| | | 59 | Accuracy results (% of URV) | % | 0.0-100.0 | 5 | F5.1 |
| | | 64 | Fuel flow rate level (L-low, M-mid, H-high) | L,M,H | | 1 | A1 |
| | | | | | Total Record Length | 64 | |
| Identical Unit Group Test Results for Appendix E | 661 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Group ID | | | 8 | A8 |
| | | 12 | Test completion date | YYYYMMDD | | 8 | I8 |
| | | 20 | Operating level (1-lowest) | | 1-99 | 2 | I2 |
| | | 22 | Average emission rate for all tests at this level | lb/mmBtu | | 6 | F6.3 |
| | | 28 | Average heat input rate for all tests at this level | mmBtu/hr | | 7 | F7.1 |
| | | | | | Total Record Length | 34 | |
| $NO_x$ Budget Program Certification Statement and Authorized Account Representative Signature | 930 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Electronic representation of $NO_x$ Budget Program certification statements | | | 18 | A18 |
| | | 22 | AAR last name | | | 25 | A25 |
| | | 47 | AAR first name | | | 15 | A15 |
| | | 62 | AAR middle initial | | | 2 | A2 |
| | | 64 | Date of signature | | | 6 | I6 |
| | | 70 | Title (AAR or AAAR) | | | 4 | A4 |
| | | | | | Total Record Length | 73 | |
| $NO_x$ Budget Program General Certification Statement | 931 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Certification statement line # | | 1-11 | 2 | I2 |
| | | 6 | Certification text | | | 67 | A67 |
| | | | | | Total Record Length | 72 | |

# APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| $SO_2$ Mass Emissions Alternative Estimation Parameters for Oil (Effective through December 31, 1995) | 311 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Pipe header ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Average flow rate of oil for the hour | | | 10 | F10.1 |
| | | 28 | Sulfur content of oil sample | % | 0.0-7.0 | 5 | F5.1 |
| | | 33 | Code for method of oil sampling from monitoring plan | ADC,ADD, ADR | | 3 | A3 |
| | | 36 | Mass rate of oil combusted for the hour | lb/hr | | 10 | F10.1 |
| | | 46 | Average $SO_2$ mass emissions for the hour | lb/hr | | 7 | F7.1 |
| | | 53 | Highest sulfur content recorded from last 30 daily oil samples | % | 0.0-7.0 | 5 | F5.1 |
| | | 58 | Missing data flag | 0,1 | | 1 | I1 |
| | | | | | Total Record Length | 58 | |
| $SO_2$ Mass Emissions Alternative Estimation Parameters for Natural Gas (Effective through December 31, 1995) | 312 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Pipe header ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Heat input from natural gas | mmBtu | | 10 | F10.1 |
| | | 26 | Sulfur content of daily gas sample | grains/scf | | 8 | F8.1 |
| | | 34 | Volume of gas combusted per day | kscf | | 8 | F8.1 |
| | | 42 | $SO_2$ emission rate from NADB or NADB default for pipeline natural gas | lb/mmBtu | | 13 | F13.5 |
| | | 55 | Missing data flag | 0,1 | | 1 | I1 |
| | | | | | Total Record Length | 55 | |
| $NO_x$ Emission Rate Alternative Estimation Parameters for Oil (Effective through December 31, 1995) | 321 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Pipe header ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Fuel flowrate of oil for the hour | gal/hr | | 10 | F10.1 |
| | | 28 | $NO_x$ emission rate F-factor for oil | | | 10 | F10.1 |
| | | 38 | Average $NO_x$ emission rate for the hour | lb/mmBtu/hr | | 6 | F6.3 |
| | | 44 | Missing data flag | 0,1 | | 1 | I1 |
| | | | | | Total Record Length | 44 | |
| $NO_x$ Emission Rate Alternative Estimation Parameters for Natural Gas (Effective through December 31, 1995) | 322 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Pipe header ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Fuel flowrate of natural gas for the hour | Mscf/hr | | 10 | F10.1 |
| | | 28 | $NO_x$ emission rate F-factor for natural gas | | | 10 | F10.1 |
| | | 38 | Average $NO_x$ emission rate for the hour | lb/mmBtu/hr | | 6 | F6.3 |
| | | 44 | Missing data flag | 0,1 | | 1 | I1 |
| | | | | | Total Record Length | 44 | |

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| $SO_2$ Control Equipment Operation Parameters | 400 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Number of scrubber modules operating | | ≥1 | 2 | I2 |
| | | | | | Total Record Length | 19 | |
| $SO_2$ Control Equipment Scrubber Module Parameters | 401 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Scrubber module number | | 1-n [36] | 2 | I2 |
| | | 12 | Date | YYMMDD | | 6 | I6 |
| | | 18 | Hour | HH | 00-23 | 2 | I2 |
| | | 20 | Average percent solids in slurry for operating scrubber module | % | 0.0-100.0 | 5 | F5.1 |
| | | 25 | Average feedrate of makeup slurry to operating scrubber module | gal/hr | | 10 | F10.2 |
| | | 35 | Average pressure differential across operating scrubber module | | | 10 | F10.2 |
| | | 45 | Average inline absorber pH | | 0.0-14.0 | 4 | F4.1 |
| | | 49 | Number of spray levels in service | | ≥1 | 2 | I2 |
| | | 51 | Average scrubber module inlet temperature | NF | | 3 | I3 |
| | | 54 | Average scrubber module outlet temperature | NF | | 3 | I3 |
| | | | | | Total Record Length | 56 | |
| $NO_x$ Control Equipment Operation Parameters | 410 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Inlet air flow rate | | | 6 | I6 |
| | | 24 | Excess $O_2$ concentration of flue gas at stack outlet | % | 0.0-100.0 | 5 | F5.1 |
| | | 29 | CO concentration of flue gas at stack outlet | ppm | | 5 | F5.1 |
| | | 34 | Flue gas temperature at furnace exit outlet duct | NF | | 3 | I3 |
| | | | | | Total Record Length | 36 | |

[36] Upper limit equals the number of scrubber modules identified for the corresponding piece of control equipment.

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| $SO_2$ Phase I Technology Post-Combustion Control Parameters<br><br>Inlet Monitors<br><br>(Phase I control units through 12/31/99) | 420 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Date | YYMMDD | | 6 | I6 |
| | | 19 | Hour | HH | | 2 | I2 |
| | | 21 | Inlet $SO_2$ emission rate for the hour | lb/mmBtu | 00-23 | 13 | F13.3 |
| | | 34 | Reserved | | | 13 | |
| | | 47 | Formula ID from monitoring plan for hourly inlet $SO_2$ emission rates | | | 3 | A3 |
| | | 50 | Method of determination code | | 01-04,14 | 2 | I2 |
| | | | | | Total Record Length | 51 | |
| $SO_2$ Phase I Technology Post-Combustion Control Parameters<br><br>Outlet Monitors<br><br>(Phase I Control Units through 12/31/99) | 421 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Date | YYMMDD | | 6 | I6 |
| | | 19 | Hour | HH | 00-23 | 2 | I2 |
| | | 21 | Outlet $SO_2$ emission rate for the hour | lb/mmBtu | | 13 | F13.3 |
| | | 34 | Reserved | | | 13 | |
| | | 47 | Formula ID from monitoring plan identifying formula deriving average hourly outlet $SO_2$ emission rates from monitor data | | | 3 | A3 |
| | | 50 | Method of determination code | | 01-04,14 | 2 | I2 |
| | | | | | Total Record Length | 51 | |
| $SO_2$ Phase I Technology Pre-Combustion Control Parameters<br><br>(Phase I Control Units through 12/31/99) | 422 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Date | YYMMDD | | 6 | I6 |
| | | 16 | Hour | HH | 00-23 | 2 | I2 |
| | | 18 | Pre-treatment fuel weight | ton | | 10 | F10.1 |
| | | 28 | Pre-treatment fuel sulfur content | % | 0.0-100.0 | 5 | F5.1 |
| | | 33 | Pre-treatment fuel gross calorific value | Btu/lb | | 10 | F10.1 |
| | | 43 | Post-treatment fuel weight | ton | | 10 | F10.1 |
| | | 53 | Post-treatment fuel sulfur content | % | 0.0-100.0 | 5 | F5.1 |
| | | 58 | Post-treatment fuel gross calorific value | Btu/lb | | 10 | F10.1 |
| | | | | | Total Record Length | 67 | |
| $SO_2$ Phase I Technology Combustion Emission Controls<br><br>(Phase I Control Units through 12/31/99) | 423 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Date | YYMMDD | | 6 | I6 |
| | | 19 | Hour | HH | 00-23 | 2 | I2 |
| | | 21 | Outlet $SO_2$ emission rate for the hour | lb/mmBtu | | 13 | F13.3 |
| | | 34 | Daily inlet $SO_2$ emission rate (determined by coal sampling and analysis) | lb/mmBtu | | 13 | F13.3 |
| | | | | | Total Record Length | 46 | |

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Unit Definition Table | 500 | 1 | Record type code | | | 3 | I3 |
| (Effective through December 31, 1995) | | 4 | Plant name | | | 20 | A20 |
| | | 24 | Unit short name | | | 20 | A20 |
| | | 44 | Unit ID (i.e., NADB boiler ID) | | | 6 | A6 |
| | | 50 | Unit classification | | | 2 | A2 |
| | | 52 | Boiler type | | | 3 | A3 |
| | | 55 | Primary fuel | | | 3 | A3 |
| | | 58 | $SO_2$ controls | | | 3 | A3 |
| | | 61 | $NO_x$ controls | | | 8 | A8 |
| | | 69 | Particulate controls | | | 6 | A6 |
| | | 75 | $SO_2$ monitoring method | | | 3 | A3 |
| | | 78 | $NO_x$ monitoring method | | | 8 | A8 |
| | | 86 | $CO_2$ monitoring method | | | 6 | A6 |
| | | 92 | Opacity monitoring method | | | 3 | A3 |
| | | | | | Total Record Length | 94 | |
| Stack/Pipe Header Definition Table | 501 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Stack/Pipe header ID | | | 6 | A6 |
| (Effective through December 31, 1995) | | 10 | Stack/Pipe header description or name | | | 20 | A20 |
| | | 30 | Unit ID | | | 6 | A6 |
| | | 36 | Submission status - Add (A), Delete (D), Correct (C), Unchanged (U) | A,C,D,U | | 1 | A1 |
| | | | | | Total Record Length | 36 | |
| Unit Definition Table | 502 | 1 | Record type code | | | 3 | I3 |
| (Revised RT 500) | | 4 | Plant name | | | 20 | A20 |
| | | 24 | Unit short name | | | 20 | A20 |
| Required January 1, 1996 | | 44 | Unit ID (i.e., NADB boiler ID) | | | 6 | A6 |
| | | 50 | Unit classification | | | 2 | A2 |
| (Effective through December 31, 1999) | | 52 | Boiler type | | | 3 | A3 |
| | | 55 | Primary fuel | | | 3 | A3 |
| | | 58 | $SO_2$ controls | | | 3 | A3 |
| | | 61 | $NO_x$ controls | | | 8 | A8 |
| | | 69 | Particulate controls | | | 6 | A6 |
| | | 75 | $SO_2$ monitoring method | | | 3 | A3 |
| | | 78 | $NO_x$ monitoring method | | | 8 | A8 |
| | | 86 | $CO_2$ monitoring method | | | 6 | A6 |
| | | 92 | Opacity monitoring method | | | 3 | A3 |
| | | 95 | Secondary fuels | | | 13 | A13 |
| | | 108 | Maximum hourly gross load in megawatts (used for load range calculations) | MWe-hr | | 6 | I6 |
| | | 114 | Maximum hourly gross steam load (used for load range calculations) | 1000 lbs/hr | | 6 | I6 |
| | | 120 | Unit definition change date | YYMMDD | | 6 | I6 |
| | | | | | Total Record Length | 125 | |
| Monitoring System Certification Status/Events | 511 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit/Stack/Pipe ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| (Withdrawn 8/97) | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Certification status/event code (PVC-provisional certification, RET-system retired) | | PVC,RET | 3 | A3 |
| | | 19 | Status/event date | YYYYMMDD | | 8 | I8 |
| | | 27 | Status/event hour | HH | 00-23 | 2 | I2 |
| | | | | | Total Record Length | 28 | |

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Reference Method Supporting Data for Gas RATAs<br><br>(Required January 1, 1998)<br>(Withdrawn 1997) | 612 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Run number | | | 2 | I2 |
| | | 18 | RM run start date | YYMMDD | | 6 | I6 |
| | | 24 | RM run start time | HHMM | 0000-2359 | 4 | I4 |
| | | 28 | RM run end date | YYMMDD | | 6 | I6 |
| | | 34 | RM run end time | HHMM | 0000-2359 | 4 | I4 |
| | | 38 | Type of RM analyzer/system | EXT, DIL | | 3 | A3 |
| | | 41 | Moisture basis of RM analysis | WET, DRY | | 3 | A3 |
| | | 44 | RM instrument span (as defined in App A, Part 60) | | | 5 | I5 |
| | | 49 | RM dilution factor | | | 5 | I5 |
| | | 54 | Reference zero gas concentration | | | 7 | F7.2 |
| | | 61 | Initial (pre-test) calibration response--zero gas | | | 7 | F7.2 |
| | | 68 | Pre-test calibration error--zero gas (% of span) | % | | 5 | F5.1 |
| | | 73 | Reference mid-level gas concentration | | | 7 | F7.2 |
| | | 80 | Initial (pre-test) calibration response--mid gas | | | 7 | F7.2 |
| | | 87 | Pre-test calibration error--mid gas (% of span) | % | | 5 | F5.1 |
| | | 92 | Reference high-level gas concentration | | | 7 | F7.2 |
| | | 99 | Initial (pre-test) calibration response--high gas | | | 7 | F7.2 |
| | | 106 | Pre-test calibration error--high gas (% of span) | % | | 5 | F5.1 |
| | | 111 | Upscale gas used during run (mid, high) | M,H | | 1 | A1 |
| | | 112 | Pre-run system response--zero gas | | | 7 | F7.2 |
| | | 119 | Pre-run system bias (non-dilution) or calibration error (dilution)--zero gas (% of span) | % | | 5 | F5.1 |
| | | 124 | Post-run system response--zero gas | | | 7 | F7.2 |
| | | 131 | Post-run system bias (non-dilution) or calibration error (dilution)--zero gas (% of span) | % | | 5 | F5.1 |
| | | 136 | Pre-run system response--upscale gas | | | 7 | F7.2 |
| | | 143 | Pre-run system bias (non-dilution) or calibration error (dilution)--upscale gas (% of span) | % | | 5 | F5.1 |
| | | 148 | Post-run system response--upscale gas | | | 7 | F7.2 |
| | | 155 | Post-run system bias (non-dilution) or calibration error (dilution)--upscale gas (% of span) | % | | 5 | F5.1 |
| | | 160 | Zero drift (% of span) | % | | 5 | F5.1 |
| | | 165 | Calibration drift (% of span) | % | | 5 | F5.1 |
| | | 170 | Unadjusted (raw) average concentration for run | | | 7 | F7.1 |
| | | 177 | % moisture in stack gas | % $H_2O$ | | 5 | F5.2 |
| | | 182 | Stack gas density adjustment factor | | | 5 | F5.1 |
| | | 187 | Adjusted average concentration for run (corrected for calibration bias/error and, if applicable, moisture and stack, gas density) | | | 7 | F7.1 |
| | | 194 | F-factor used for conversion to lb/mmBtu | | | 6 | I6 |
| | | 200 | Formula code for formula used to convert to lb/mmBtu | | | 5 | A5 |
| | | | | | Total Record Length | 204 | |

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Reference Method 2 Supporting Data for Flow RATA Tests<br><br>(Required January 1, 1998)<br>(Withdrawn 1997) | 613 | 1 | Record Type | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Monitoring system ID | | | 3 | A3 |
| | | 13 | Run start date | YYMMDD | | 6 | I6 |
| | | 19 | Run start time | HHMM | 0000-2359 | 4 | I4 |
| | | 23 | Run end date | YYMMDD | | 6 | I6 |
| | | 29 | Run end time | HHMM | 0000-2359 | 4 | I4 |
| | | 33 | Run number | | | 2 | I2 |
| | | 35 | Operating level | L,M,H,N | | 1 | A1 |
| | | 36 | Number of traverse points | | | 2 | I2 |
| | | 38 | (Square root of $\Delta P)_{avg.}$ | in. $H_2O$ | | 5 | F5.2 |
| | | 43 | $T_s$, stack temperature | °R | | 4 | I4 |
| | | 47 | $P_{bar}$, barometric pressure, in. Hg | in. Hg | | 5 | F5.2 |
| | | 52 | $P_g$, stack static pressure, in. $H_2O$ | in. $H_2O$ | | 5 | F5.2 |
| | | 57 | % $CO_2$ in stack gas, dry basis | % | | 5 | F5.2 |
| | | 62 | % $O_2$ in stack gas, dry basis | % | | 5 | F5.2 |
| | | 67 | % moisture in stack gas | % $H_2O$ | | 5 | F5.2 |
| | | 72 | $M_d$, stack gas molecular weight, dry basis | lbs/lbs-mole | | 5 | F5.2 |
| | | 77 | $M_s$, stack gas molecular weight, wet basis | lbs/lbs-mole | | 5 | F5.2 |
| | | 82 | $C_p$, pitot tube coefficient | | | 5 | F5.3 |
| | | 87 | Date of latest pitot tube calibration | YYMMDD | | 6 | I6 |
| | | 93 | $A_s$, stack or duct cross-sectional area at test port | $ft^2$ | | 6 | F6.1 |
| | | | | | Total Record Length | 98 | |
| Cycle Time/Response Time Test Data and Results<br><br>(Effective through December 31, 1995) | 620 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Date | YYMMDD | | 6 | I6 |
| | | 22 | Start time | HHMM | 0000-2359 | 4 | I4 |
| | | 26 | End time | HHMM | 0000-2359 | 4 | I4 |
| | | 30 | Response/cycle time | Min | | 2 | I2 |
| | | 32 | Start monitor value | | | 13 | F13.3 |
| | | 45 | Reference value | | | 13 | F13.3 |
| | | 58 | Monitor value at which 95% of the reference value change has occurred | | | 13 | F13.3 |
| | | | | | Total Record Length | 70 | |
| Alternative Monitoring System Approval Petition Data<br><br>(Renumbered as 640, July 3, 1997) | 630 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/ Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | AMS ID | | | 6 | A6 |
| | | 22 | Date | YYMMDD | | 6 | I6 |
| | | 28 | Hour | HH | 00-23 | 2 | I2 |
| | | 30 | Hourly test data for alternative monitoring system | | | 13 | F13.3 |
| | | 43 | Hourly lognormalized test data for alternative monitoring system | | | 13 | F13.3 |
| | | 56 | Hourly test data for reference CEMS | | | 13 | F13.3 |
| | | 69 | Fuel type code | | | 2 | I2 |
| | | 71 | Operating level - Low, Normal, High (L,N,H) | L,N,H | | 1 | A1 |
| | | 72 | Gross unit load | MWge | | 6 | I6 |
| | | | | | Total Record Length | 77 | |

## APPENDIX B: RETIRED/RENUMBERED RECORD TYPES (FROM EDR v1.3) (cont.)

| RECORD TYPE | TYPE CODE | START COL | DATA ELEMENT DESCRIPTION | UNITS | RANGE | LENGTH | FORMAT (FTN) |
|---|---|---|---|---|---|---|---|
| Alternative Monitoring System Approval Petition Results and Statistics<br><br>(Renumbered as 641, July 3, 1997) | 631 | 1 | Record type code | | | 3 | I3 |
| | | 4 | Unit ID/Stack ID | | | 6 | A6 |
| | | 10 | Component ID | | | 3 | A3 |
| | | 13 | Monitoring system ID | | | 3 | A3 |
| | | 16 | Unit of measure (1=ppm, 2=lb/mmBtu, 3=scfh, 4=%) | 1,2,3,4 | | 1 | A1 |
| | | 17 | Arithmetic mean of AMS values | | | 13 | F13.3 |
| | | 30 | Arithmetic mean of CEM values | | | 13 | F13.3 |
| | | 43 | Arithmetic mean of differences of paired AMS and CEM values | | | 13 | F13.3 |
| | | 56 | Variance of differences | | | 13 | F13.3 |
| | | 69 | Variance of measured values of AMS | | | 13 | F13.3 |
| | | 82 | Variance of measured values for CEM | | | 13 | F13.3 |
| | | 95 | F-statistic | | | 13 | F13.3 |
| | | 108 | Critical value of F at 95% confidence level for sample size | | | 13 | F13.3 |
| | | 121 | Coefficient of correlation (Pearson's r) of CEM and AMS data | | | 13 | F13.3 |
| | | 134 | Shapiro-Wilk test statistic (W) for AMS data | | | 13 | F13.3 |
| | | 147 | Shapiro-Wilk test statistic (W) for CEMS data | | | 13 | F13.3 |
| | | 160 | Lognormally adjusted data used in final analysis (1=yes, 0=no) | 0,1 | | 1 | I1 |
| | | 161 | Autocorrelation coefficient (ρ) for AMS data | | | 13 | F13.3 |
| | | 174 | Autocorrelation coefficient (ρ) for CEM data | | | 13 | F13.3 |
| | | 187 | Autocorrelation coefficient (ρ) for differences of paired AMS and CEM data | | | 13 | F13.3 |
| | | 200 | Adjustment for autocorrelation used in final analysis (1=yes, 0=no) | 0,1 | | 1 | I1 |
| | | 201 | Covariance of alternative monitoring data and associated lag(1) values | | | 13 | F13.3 |
| | | 214 | Covariance of continuous emission monitoring data and associated lag(1) values | | | 13 | F13.3 |
| | | 227 | Covariance of differences of paired AMS and CEM data | | | 13 | F13.3 |
| | | 240 | Standard deviation of AMS data | | | 13 | F13.3 |
| | | 253 | Standard deviation of CEM data | | | 13 | F13.3 |
| | | 266 | Standard deviation of differences of paired AMS and CEM data | | | 13 | F13.3 |
| | | 279 | Standard deviation of lag(1) AMS data | | | 13 | F13.3 |
| | | 292 | Standard deviation of lag(1) CEM data | | | 13 | F13.3 |
| | | 305 | Standard deviation of lag(1) differences of paired AMS and CEM data | | | 13 | F13.3 |
| | | 318 | Variance inflation factor for AMS data | | | 13 | F13.3 |
| | | 331 | Variance inflation factor for CEM data | | | 13 | F13.3 |
| | | 344 | Variance inflation factor for difference of paired AMS and CEM data | | | 13 | F13.3 |
| | | | | | Total Record Length | 356 | |